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from screen to page



Issue 6, Autumn 2000

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Do The Write Thing

We'd like to make Clubbed more "interactive" so we need your input!

Got a question you'd like answered or an opinion you'd like to share? Write to us and we'll include it in a letters page.

Got a tip for other readers or even an article up your sleeve? Send it in and you could very well see your name in print.

Got a suggestion or comment on the magazine? Let us know and we'll try and make Clubbed better for you.

CONTENTS

By
Robert Williams



thank you to all the contributors who helped me with this issue, and to Sharon who checked an avalanche of articles in record time.

Despite the lack of time we've got some interesting articles in this issue. Mick has been playing Hyperion's first product, a port of the magical romp Heretic II that will push your PPC and BVison to the limit! I've reviewed PageStream 4, as used to produce Clubbed, and Gary Storm has been speaking to Gary Peake, head of developer support at Amiga. New in this issue is the Top Tips section, the idea behind it is to have space for useful ideas and hints that don't really merit a complete article in themselves. If you have any tips you think other readers might find useful please send them in for inclusion in "Top Tips".

Chairman

By
Mick Sutton



This quarter I would like to talk about Amiga shows, with the success of the third Kickstart show and still no firm news on the WoA (World of Amiga), it got me thinking (along with many other SEAL members) that maybe the small shows are the way to go at the moment with low user base and fewer companies currently in the Amiga marketplace.

Now don't get me wrong, I love WoA and all the atmosphere that comes with a large show, nevertheless, these shows take an enormous amount of planning, organising and a lot of finance to materialise, and without major input from user groups and the like, last years show just wouldn't have even happened! So if we can help organise such a major event then we should be able to run a smaller show of our own.

With the combination of low user base and lack of news with this years WoA and the apparent success of K3 (Kickstart show 3), we (SEAL) decided that yes, the time was right to do a show of our own, and if our show is nearly as successful as K3 we will be happy bunnies indeed.

In these frugal times it would be better to have a couple of small shows run by

Amiga Users than no show at all, and in fact due to the low table costs involved, companies attending are likely to make considerably better profits. Also the end user benefits with low entry fee (£1), but still with all the hardware and software available that might have been at a larger show.

Also, I have been surprised at the response that we have had in setting up this show, with companies such as Amiga Inc letting us have a couple of magic packs and various freebies to give away as door prizes, Analogic (put deal details here), Blittersoft hopefully exhibiting the Boxer Amijoe and hopefully Fusion PPC, Eyetech, Software sales from the likes of Forematt Home Computing and Epic, and of course Crystal Interactive Software hoping to release Dark Millennia at the show, I just can't wait for the show to start!

So I welcome you to SEAL-O-RAMA 2000 on Sunday September 10th at our local venue in Basildon, I hope you can all attend and enjoy yourselves.

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Autumn 2000

Clubbed.info

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 (19:00 - 22:00 GMT only please).

Only Amiga Made it Possible

Clubbed is designed and laid out using:

Hardware:
 Amiga 3000
 CyberStorm PPC/060
 CyberVision PPC
 64Mb RAM, about 8Gb HDD space.

Software:
 PageStream 4 by Softlogik
 ImageFX 4 by Nova Design
 Photogenics 4 by Paul Nolan
 Final Writer by Softwood

There are also some essential utilities we couldn't live without: Directory Opus, Magellan II, MCP, Turbo Print 7, MakeCD.

Our thanks to the creators of this and all the other great Amiga software out there.

Clubbed is entirely created on the Amiga, no other machines are used at any stage of the design or layout process.

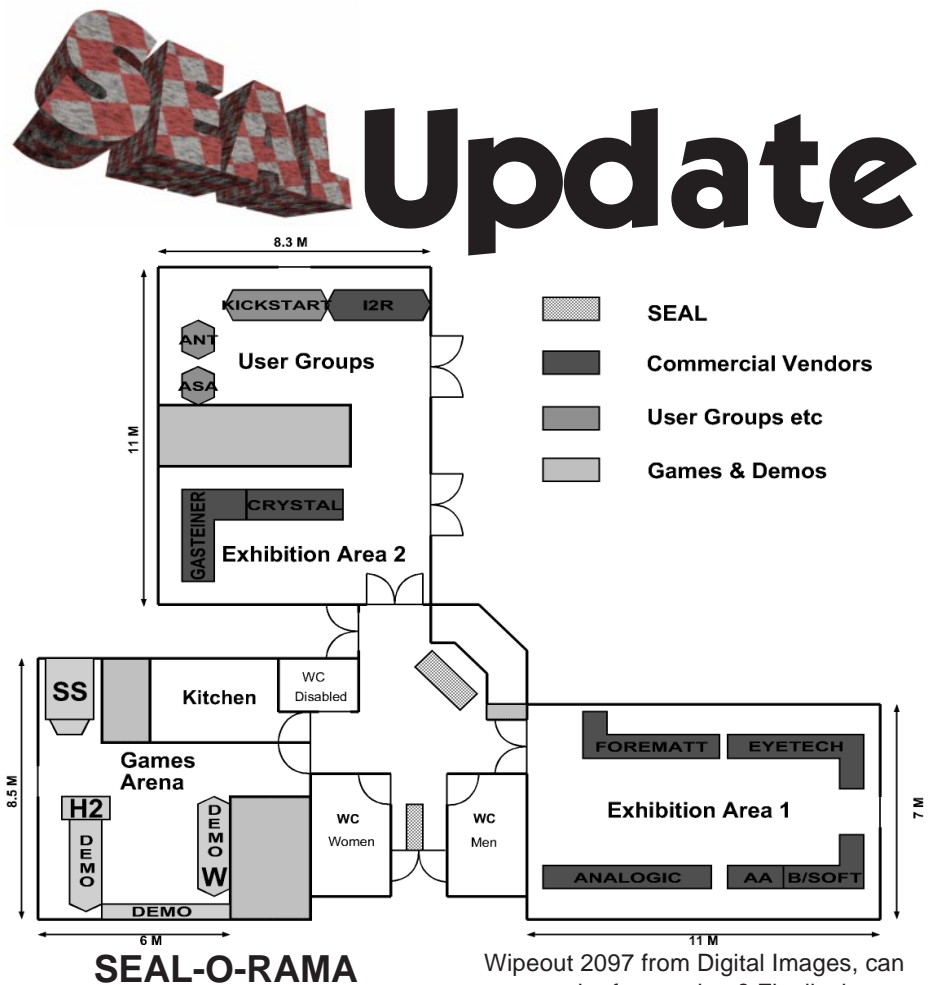
Legalese

The views expressed in this magazine are those of the author of each piece, they do not necessarily reflect the views of the editor, other contributors or SEAL.

Please Note: Clubbed is produced by SEAL members in their spare time, while we will always strive to produce the magazine on time and include all the advertised contents this is not always possible due to other commitments. The price you pay for Clubbed covers our costs and nothing more, we don't make a profit from it.

If you wish to contact a contributor please send your message to one of the addresses above and we will pass it on.

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Over the last few months SEAL have been working hard preparing for our first public Amiga show which we are holding on Sunday September the 10th at our regular meeting venue in Basildon, Essex. The show has been christened SEAL-O-RAMA 2000.

We have been very pleased with the response from companies to the show and several of the big names are attending: Analogic, Blittersoft and Eyetech. We also have Gasteiner coming along to sell generic hardware (hard drives, RAM etc.). Crystal Interactive software hope to release their new game Bubble Heroes at the show and will be previewing their forthcoming titles Gilbert Goodmate and Dark Millennia. Amiga Active will be there to sell magazines and subscriptions and to cover the show. The final exhibitor is Ideas 2 Reality sell PC systems based on alternative operating systems, they hope to have a QNX system at the show which should be interesting.

Three games competitions will be taking place in the Games Arena. You'll be able to go head-to-head in Hyperion's brand new magical romp Heretic II. The second game is the futuristic 3D racer

Wipeout 2097 from Digital Images, can you get the fastest time? Finally there will be the classic Sensible Soccer tournament with the chance to win a brand new A1200 courtesy of Amiga Inc.

So far it's shaping up to be a great show, we hope to see you there and if you can't make it we will be posting a selection of photos on the SEAL website (<http://www.seal-amiga.co.uk/>) after the show and a report in the next issue of Clubbed.

Projector

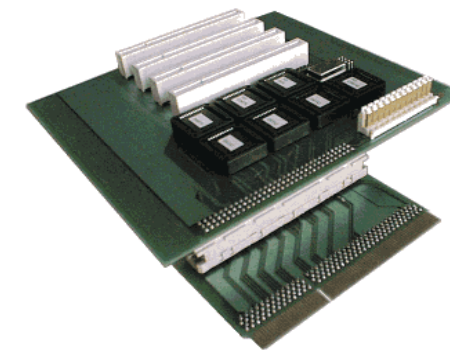
In an amazing stroke of luck SEAL has been given a video projector to improve presentations given at club meetings. The projector allows us to display output from a variety of sources including Amigas with and without graphics cards and video sources on to a screen or wall for much easier viewing by a group of people. We previously experienced this when Chris Green of Kickstart gave us a demo of OS 3.5 on his projector, it made an enormous difference over even a large monitor as everyone could comfortably see what he was doing on screen. The projector was used for the first time at the SEAL meeting on Friday the 9th of June... demonstrations and tutorials will never be the same again!

Elbox Brings PCI to the Amiga

Polish hardware maker Elbox have announced the first fully functional PCI bus board for the Amiga, the Mediator. PCI (Peripheral Component Interconnect) cards are the standard in the PC world and thus a wide variety of cards are available at very low prices compared to Amiga specific hardware. Typical PCI cards include SCSI controllers, parallel and serial ports, Ethernet, sound cards and of course graphics cards. One slight problem is that many PC graphics cards now use the dedicated AGP (Advanced Graphics Port) slot but PCI versions are still available in most cases.

Initially two versions of the Mediator will be available both for towered A1200s. One version connects to Apollo's Z4 board which will allow PCI and Zorro slots in one machine. Also available will be a stand-alone busboard for those who don't need Zorro. In the future versions for big-box Amigas may also be produced.

Vision Factory Developments have announced that they will be supporting graphics cards on the Mediator with their CyberGraphX software. The free version 3 will ship with the bus board and drivers will also be available for the commercial version 4. In a later announcement Vision Factory said that they already have a S3 Virge based PCI graphics board working with CyberGraphX and the Mediator and that drivers for 3DFX's Voodoo 3 cards are currently in development. For those who don't keep up with PC hardware the S3 Virge is quite an old graphics chip, it was used on the Phase 5 CyberVision 64/3D. However very cheap PCI cards based on this chip



are available so a Mediator/Virge combination could well undercut other Amiga graphics card options. The 3DFX Voodoo 3 while not at the top of the heap for PC graphics cards should offer 3D performance well in excess of anything currently available on the Amiga including the Permedia II based C/BVision PPC cards.

It is unknown whether drivers for other types of card will ship with the Mediator, the Power Computing website does hint that drivers for MPEG-2, Ethernet, ISDN, sound and USB cards may be forthcoming (although they may just be listing what is possible).

According to Elbox Mediator boards should be available around the time you receive this magazine. The expected selling price is around £130.

Elbox has a simple website at <http://www.elbox.com/>

Information on CyberGraphX can be found at: <http://www.vgr.com/>

Elbox products are distributed in the UK by Power Computing: <http://www.powerc.com/>
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CyberGraphX

Photogenics Version 5 in Beta

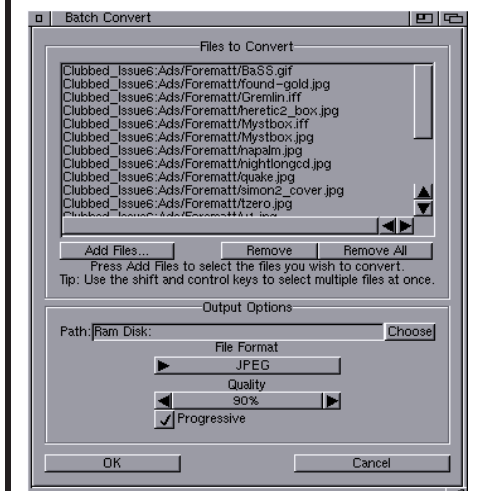
Paul Nolan has released the first beta of Photogenics 5. When this version comes out of beta it will be the first to be released for both Amiga and Linux. The most important new features in the current 5 beta are:

- Batch file conversion.
- A new file format for saving Photogenics projects.
- Many new loaders and savers, including PCD, EPS, Pict, Postscript, RAS, SGI, TIFF, XBM, XPM, and XWD.
- Alpha transparency support when saving PNG files.
- A Vignette feature for smoothly blending special effects and images together.
- A much improved New Image requester, with masses of presets, and support for real life measurement units.
- New paint modes such as Remove RedEye, Sepia, Roll Blur, Rub Tiled, Cross Blur, Star Blur, and Plus Blur.
- One more feature will also be making it into the final release that isn't present here.

The Photogenics project file format is particularly interesting as it will allow you to save a work-in-progress image with its layers intact, an extremely useful feature.

In an unrelated move Amiga have announced that Paul Nolan is joining the Amiga team working on the new Amiga environment. Paul notes on his website that his work for Amiga should not effect the speed of Photogenics' development.

<http://www.paulnolan.com/>



The new batch file conversion window.

X-Surf IDE

Individual Computers have released drivers for the IDE ports on their X-Surf Zorro II expansion card (which features Ethernet, IDE and Clockport connections). The drivers are a free download from the Individual Computer's website, this was made possible by the generosity of the retailers who distribute the X-Surf worldwide, including Eyetech in the UK.

<http://www.jschoenfeld.com/>

X-Surf cards are available from Eyetech in the UK at £79.95:

<http://www.eyetech.co.uk/>
+44 (0) 1642 713185

TurboPrint 7.12

Another update to the popular printing package is now available, this time with improved quality drivers for HP DeskJet 930, 950, 970 (1200 / 2400dpi) and higher speed drivers for the Canon BJC 1000, 2000, 6xxx, 7xxx and new Epson printers. To use 7.12 you must have the paid 7.10 upgrade.

7.12 can be downloaded from the IsreeSoft website at:
<http://www.irseesoft.com/>

Amihoo

Michael Carrillo, long time friend of SEAL has opened a new Amiga resources website called Amihoo. It features a number of sections such as Amiga shops, hardware and software developers and usergroups and unlike standard web links pages Amihoo has all types of contact information including addresses and phone numbers. Other features include an on-line magazine with several correspondents in different parts of the world and a monthly poll.

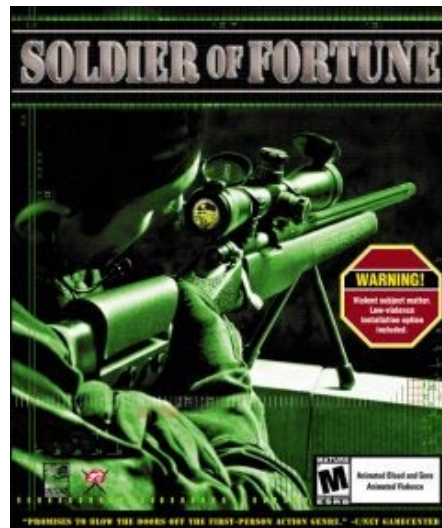
Amihoo can be found at
<http://www.amihoo.com/>

Soldier of Fortune

Prolific games developer Hyperion Software (who have just released their first title Heretic II, reviewed on page 36) have added Raven Software's Soldier of Fortune to their list of forthcoming ports of popular PC games. SoF is a first person perspective story-based action game that pits you, as the soldier of the title, against a fanatical terrorist group. There are 10 covert missions which cover 31 levels set all over the world. In addition to the single player game there are also a wide variety of multi-player options. Soldier of Fortune is expected to be ready early next year.

Hyperion are at:

<http://www.hyperion-software.com/>



Perfect Paint 2

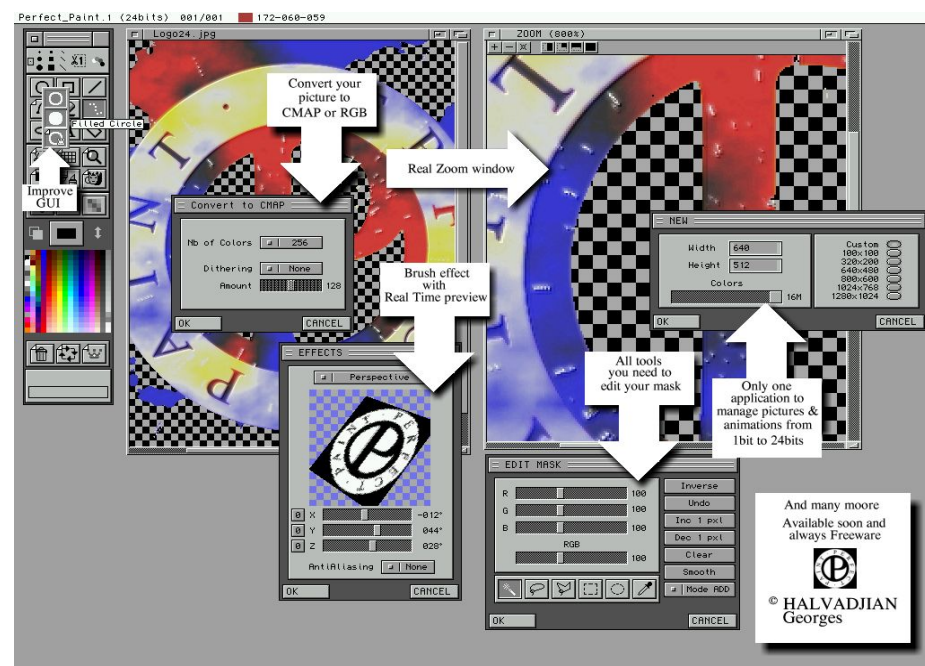
Perfect Paint started out as palette based paint program a bit like a more modern version of Deluxe Paint. However the author, Georges Halvadjian, soon added 24bit support and with version 2 this is turning into a very useful little program, especially if you want something to work with both palette based (1 to 8bit) and true colour (24bit) images. Here are some of the new features in version 2:

- Sorry for AGA users, but this version works only with graphics card and CyberGraphX or Picasso 96.
- Improved GUI.

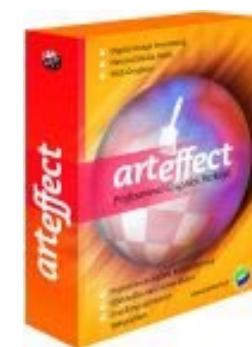
- More Arexx commands.
- Add brush effects with real time preview.
- Improve zoom with real window.
- Convert pictures, animations and brushes to CMAP or RGB.
- Added several tools to edit your mask: magic wand, lasso, polygon, elliptical marquee etc.
- TurboPrint support.
- Colour and Gamma correction.

Best of all PerfectPaint is freeware and can be downloaded from:

<http://gothic.fr.free.fr/amiga/>



Amiga Writer 2 and ArtEffect 4



Haage and Partner have released new versions of two major Amiga applications, Amiga Writer and ArtEffect.

Amiga Writer 2

This word processor is a fairly new addition to Haage and Partner's range, it includes particularly powerful features for technical document creation (such as chapter management and proper footnotes).

- Index generator
- Postscript font engine
- Spell checking
- Printed manual (according to a recent Amiga Active review this is currently in German)
- MS Word, FinalWriter and Wordworth Import
- TrueType Support with AntiAliasing
- Brochure Print

Amiga Writer is the first application I know of on the Amiga to support font antialiasing. This process uses shaded pixels (for example greys for black text on a white background to smooth the

look of scalable fonts. This makes the display much more readable especially at small font sizes.

ArtEffect 4

The new version of ArtEffect includes many enhancements to the layers system making it even more powerful and flexible. The program is supplied on CD-ROM along with a selection of fonts, clipart and tutorials. Some of the key features in this upgrade are:

- Heavily improved layers
- Indexed colours
- Improved colour ranges
- New filters
- Many optimisations

Further information and demo versions of both packages are available from Haage and Partner's website:
<http://www.haage-partner.com/>

Blittersoft distribute H&P products in the UK:

<http://www.blittersoft.com/>
+44 (0) 1908 225454

Kickstart Shareware Registration Service

Kickstart, the well known Amiga user group based in Surrey is now offering UK based registration facilities for a number of shareware products. So far they have signed up the following titles:

- MooVid
- RiVa
- Frogger
- SoftCinema

Kickstart hope their service will benefit UK Amiga users because it should be easier, quicker and cheaper than sending money abroad. This in turn will hope-

fully lead to an increase in registrations for the shareware authors. Kickstart are actively seeking shareware authors who would like their products to be available via this service.

Kickstart's website also hosts the support information for Diga's popular word processor Wordworth, this includes an FAQ. An upgrade from Wordworth 7 to 7.01 is available for download.

Kickstart are at:
<http://www.kickstart-amiga.co.uk/>



SoundFX 4.00

This modular audio sample editor is now up to version 4. It boasts over 50 effects each of which has many parameters and can have complex modulations applied. Some of the effects available:

- Sound Synthesis (AM, FM, ...)
- 3D-Cube-Parametermodulation (Mix, Equalize)
- Effects e.g. Hall, Echo, Delay, Chorus/Phaser, Morph, PitchShift ...
- Operations e.g. Resample, ZeroPass (FadeIn/FadeOut), Middle, Amplify, Mix, DeCrackle, ConvertChannels ...
- 2D/3D-Spectrumanalysis
- Very good filters and boosters with resonance!!!

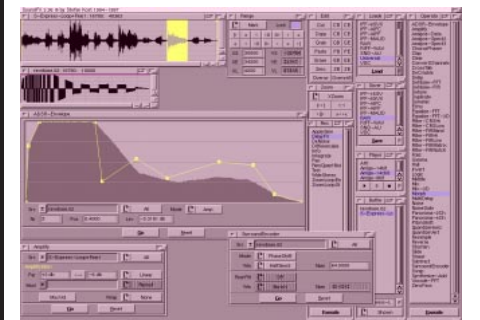
Nearly every parameter can be modulated in the following ways :

- Curve : fades smoothly from one value to a second with variable curvature
- Cycle : oscillates between two value with different waveforms, frequency and phase are adjustable
- Vector : envelope editor.
- User : a sample buffer modulates the value, contains several mappings, can even grab the modulator volume or pitch-envelope.

Multiple samples can be loaded and you can work with them in memory or on disk. A wide variety of file formats are supported for loading a saving. Samples can be played through Paula in 8bit, 14bit and 14bit calibrated qualities and AHI is supported for sound card owners.

SoundFX costs £20 and can be registered on-line via RegNet. Much more information and a demo version is available on the SoundFX home page at:

<http://www.imn.htwk-leipzig.de/~kost/soundfx.html>



Amiga & Palm

Version 2 of Ralph Torchia's Spitfire Palm Desktop for the Amiga is available. Spitfire replicates the 3com Palm (or compatible) hand held computer's Date Book, Address Book, To Do List, and Memo Pad applications on the Amiga using a MUI interface. Spitfire allows the data in the Palm and on the Amiga to be synchronised via a HotSync, the Palm's cradle is connected to the Amiga via the serial port. Spitfire can also be used to upload data file and install third party applications onto the Palm device. The major new feature of version two is the HotSync Manager utility which runs in the background allowing a HotSync to be performed by simply pressing the button on the Palm's cradle.

Spitfire is shareware and costs 25USD (about £16), on-line registration is available.

<http://www.windsor.igs.net/~torchia/spitfire2.html>



FFNews Now Freeware

In simultaneously good and bad news, Thorsten Stocksmeier has released his previously commercial Usenet news reader FFNews as freeware. The sad news is that he has ceased development in part due to piracy. The freeware version is not supported but fortunately FFNews seems to be quite a mature product. It offers most of the features you would want from a newsreader including on and off-line reading, EMail support and plenty of configuration options. It also boasts an attractive MUI interface complete with extensive context-sensitive on-line help.

The freeware version of FFNews can be downloaded from:
<http://www.flavour-technologies.de/>

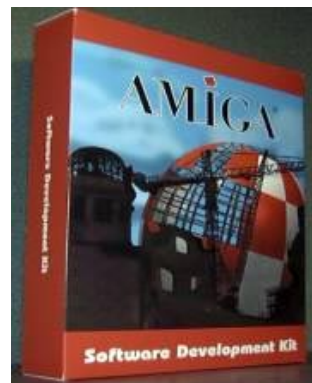
Amiga Inc. News

Amiga One

In a surprise announcement Amiga have committed to producing (or at least commissioning the production of) a new desktop Amiga machine to be called the AmigaOne. No details have been made available at the moment although Bill McEwen did mention in a recent executive update that it would feature processor options from 600MHz to 1GHz! As Amiga have recently signed a deal with graphics card maker Matrox it seems a strong possibility that the new machine will also feature one of their chips.

Amiga SDK Released

The new Amiga company, formed by Fleecy Moss and Bill McEwen at Christmas has released its first product, the Amiga Software Development Kit (SDK). The SDK runs on top of Linux (Redhat's 6.1 distribution is recommended) and a version that runs over Windows is expected in the next month or so. The final version of the Amiga Environment will be able to run hosted on another OS, as the SDK does today, or stand-alone. The initial release of the SDK contains little Amiga specific content and is mostly to let developers get started with Tao's Elate OS, the basis of the new Amiga environment. Future SDK releases should slowly gain more Amiga specific features as the debut of the first new Amiga systems approaches.



The Amiga SDK.

d'Amiga Developer Workstations



Amiga have signed up dealers in various territories to build and sell developer workstations based on the new SDK. These systems go under the name d'Amiga and sport the same basic specification as the developer box announced a few

months ago: AMD K6 II 500Mhz processor and Matrox G400 dual head graphics card. The systems are supplied pre-installed with RedHat Linux 6.1 which is recommended for the SDK. The d'Amiga workstation is bundled with a priority developer support contract worth 1000USD that guarantees an response to issues, questions and requests within 24hours and offers various other benefits and discounts.

d'Amiga systems are available in the UK from Eyetech:

<http://www.eyetech.co.uk/>
+44 (0) 1642 713185

Amiga World Issue 3

Amiga have released issue three of Amiga World, their magazine designed to give Amiga users information "from the horse's mouth". The new issue includes a summary of the recent AmiWest show in held in Sacramento, a look at Haage and Partner's plans for the new Amiga and an interview with Dean Brown (the man behind DKB who made many Amiga expansions) who Amiga have recently taken on as their Director of Hardware. As usual Amiga World is available on-line or as a PDF file for printing.

The Amiga website is at
<http://www.amiga.com/>

Amiga Inc. Update

By
Gary Storm

A.K.A. The Starship Amiga.

You look across the facility as she is being lovingly assembled. Her radiant curves caressing your senses, with a promise of pleasures to come. It's been a hard struggle to reach this point, with many suitors promising the universe and delivering only dust. This time is the last time that she will hear lies. If this dream fails her shadows will live on in some form, to eventually fade and live on only in the hearts of those who had the vision to see beyond what could be seen. This time is the last time. And as fortune, fate or whatever you believe in has decreed, this time is the best time, the best chance, as the best people with truth in their hearts forge their own technological Samurai Sword, tempered with love and reality to be cutting edge and a bringer of freedom.

Amiga (Bill McEwen, Fleecy Moss, Gary Peake and the gang, and you) have managed in eight months what didn't happen in 6 years with any of the others. They have released the first real tangible Amiga products (the SDK and DevBox), as well as laying sound plans for an Amiga release and rebirth for early 2001.

Yes, in less than six months you will have the opportunity to buy a brand new Amiga desktop computer, a PDA (Personal Digital Assistant - like the Psion range), or portable computer.

These machines will be made by third party manufacturers, just as PCs are made now.

These machines can be made based on specs defined by Amiga. These machines will not be limited to those specs. They can be computerised chameleons, adaptable to practically any environment.

How? Basically the Amiga OS environment is based upon Tao Group's Virtual Processor, which is able to run on practically any hardware you can think of, what this means is that you have a 'Walrus' computer, your friend has a totally differently configured 'Polar Bear' computer, and some dude on the other side of the planet has a state of the art 'SEAL' web-tv. All these computers are running the Amiga OS, either natively (on it's own), or hosted (on top of Windows, Linux, etc).

A developer produces a game or application in whatever language they choose, for whatever computer they're aiming at. They then convert it for use with the Amiga OS and it's VP. That game or app is now instantly accessible by anyone running the Amiga OS, without much more work than a bit of specific hardware code tweaking (if they wanted to). Everyone running Amiga enabled software will be able to buy exactly the same copy from the store, and run it on whatever computer you have, as long as you have the Amiga OS somewhere on it. Amazing, eh?

It's like chucking any unleaded, leaded, diesel or gas fuel into your car, and it'll work as long as the car has the Boing-Ball attachment, and the fuel has red

and white checks.

We may have all had a healthy scepticism of these aspirations, which is understandable considering all the other vapor that came and went before the Millennium dawned, but Amiga have been making dreams reality, as you'll see with the Gary Peake interview on page 10.

Amiga have the technology, are working on fine-tuning it and throwing in a great measure of what we love about the 'classic' Amiga OS that you use today, as well as any of the good stuff that Windows and MacOS have (without the bloat and patronisation).

Amiga have the partners. Publicly they have Sun, Corel, Red Hat Linux, Matrox, Rebol, and more. Who knows who they have privately (I can guess, but I won't), but I'm sure you won't be disappointed.

And if you think that the excitement is only growing within the Amiga community, then think again. Amiga's revolutionary (yes, it's that word again) vision is making people sit up and take notice all over the tech world. Anyone on the net just has to look at the last couple of months on Czech Amiga News alone to see links to all the coverage from such sites as ZDnet, ZDTV, Slashdot, IBM, CNN, TechRepublic, Desktopia, ArsTechnica, and many more. Expect it to get hotter the closer to release time Amiga get.

So what next?

Over the next few of months Amiga and the developers will continue tweaking the OS, and writing apps and games for it. We'll get to hear more about their partners, and see more news reports.

It's looking very exciting as the Starship Amiga prepares for launch.

For up-to-the-minute News...

...visit these fine news sites:

The official Amiga website:

<http://www.amiga.com/>

Czech Amiga News:

<http://www.realdreams.cz/amiga/>

Amiga.org:

<http://www.amiga.org/>

Amigafresh:

<http://www.amigafresh.co.uk/>

Gary Peake Interview

Gary Storm talks to Amiga's head of developer support.



Firstly Gary, congrats on working at Amiga. You've been an Amiga stalwart forever, and I know from how straight forward and honest you've been on the Team AMIGA mailing list over the years that you wouldn't work for any company just because they were called Amiga.

I came to work for Bill McEwen because he is genuinely interested in the Amiga and in taking it to a point that it should now be at had hardware and software upgrades been made over the last ten or so years.

Bill believes in the Amiga, and what made it special and the people we call Amigans. I truthfully think this is our last best chance to make it happen.

You had to move your entire family from your home in Texas to Amiga HQ in Snoqualmie. A lot of trust and a pretty hectic trip? What does your family think of their new home and your new job?

Actually, the trip went fairly well. My wife Linda, as well as Jonathan and Jennifer are still in awe at the beauty of the Washington area

When did you get the call, what exactly are you responsible for and why do you think they chose you over anyone else?

Actually, when Bill McEwen left Gateway I knew he was going to be heading in the direction of buying Amiga. Neither of us discussed my employment with Bill if he did buy Amiga from gateway though.

I got the call and offer quite unexpectedly and was proud to be asked. I never asked why he chose me, only what it was he expected of me.

You have a printing background. What skills did you bring to the job of developer support, and what have you had to have a crash course on to aid you?

Actually, I come from three generations of newspaper people. My personal experience is in newspapers, auto dealerships (Parts, Service, Marketing, and even running one or two for a major manufacturer), and lastly support for a national US company who did printing for major corporations all over the world.

What was your first mission on arrival at the HQ?

Survive a crash on Seattle's highways:).

What happened?

I had had two bad flights (delayed in Houston for engine problems after two attempted takeoffs, and delayed in Phoenix for a gauge malfunction on take off. I was running very late getting into Seattle. Got my rent-a-car, took off just as it started drizzling rain. Next thing I know, about 12 minutes into my drive down the freeway, every car is stopping just as we are going over a rise in the road. I wasn't able to see them stopping until I topped the hill and tried to swerve to miss them. I almost made it, but it took the entire right side of the Hyundai off the car. I broke my glasses and watch band without even knowing I had. Was dazed for a few days, but that is normal. :)

Amiga have been saying for a long time that they have many interested parties from large and small companies. Obviously some have come to light as partners such as Sun, Corel, Matrox, Rebol, Red Hat Linux etc. What level of interest is there really, and how have you impressed the ones that are genuine?

There are several levels of partnership. Some are business to business and others are developmental. The partnerships people are hearing about are, for the most part, people who sought us out because they have heard what we are doing and want to be a part of it.

As everyone knows, Bill makes all major announcements for Amiga Inc. and we like it like that so I won't go into who may or may not be interested here.

I assume we can expect to hear of some big name partners soon?

Hypothetically, if Sony, IBM or Motorola were to openly support the Amiga effort, then that in turn would attract a lot of other major developers. Unless of course the (hypothetical) big names have already been lobbying privately for Amiga.

We have quite a few friends at large companies who are ex-Amigans and are quietly and sometimes not so quietly lobbying their companies to support us. We have developers from almost every major .com company working on open source applications right now. They are doing this on their own time, just because they love the Amiga.

Yeah, Amiga has had a fair amount of good coverage over the last two months,

and a lot of interest in the VP/OS.

This is not from us going out and seeking coverage. News agents are coming to us asking what we are doing.

The SDK has been released for a couple of months now. How have the sales been going? At least one retailer in the UK has only sold a few copies.

Understandably sales are limited by the amount of developers that have the right system set-up.

Sales are ahead of projection at this point and we feel that as our Dev Boxes and Windows hosted SDK gets out that more developers will come on board.

It is hard to ask a developer who has a system set up for development on a particular platform to change everything he/she is doing just to develop for us. The more platforms we cover, the greater the opportunity there is for the Amiga platform to gain some really broad developmental support across the board.

So when can we expect the next version (with Windows hosting ability)?

30-45 days.

Just to clear this up once and for all Gary, what exactly are the royalty and licensing details for software written for the next Amiga?

See the amiga.com web site (<http://www.amiga.com/corporate/071800-mcewen.shtml>). I think Bill spells it out plainly.

Below is an extract from the page quoted by Gary on the Amiga.com website for those not on the Internet, Ed.:

Secondly, the End User Licence Agreement that made it into the SDK is in error as a result of a legal misinterpretation. There is NO ROYALTY to be paid for any application either created with the SDK or which will run on Ami. Amiga will be creating a scheme in which third parties can pay a royalty to Amiga in exchange for official Amiga certification, branding and promotion. This provides a revenue stream to Amiga and a value add for the third party. This scheme is entirely voluntary.

Initially, Nvidia were chosen to become the graphic card partner, and

they are the leaders at the moment with their GeForce 2 chipset. Why did you change to having Matrox (with the much older G400 card) as your development partner?

No, we were looking at NVidia. We decided to go with Matrox because they are looking at the same 3D, games, and professional video targets we are. I do not agree that Matrox is a second best choice. Quite

frankly, one gets much better screen imagery and no heat up and shut down problems with the G400. I think it is an excellent developmental video system and what they have coming will be even better. Amigans deserve quality at an affordable price and we think we can get there with Matrox's support and assistance.

You've seen what Matrox have to offer for their next generation gfx cards, haven't you? What's your impression, what kind of memory are they using (the new Fujitsu memory?), and what kind of 2d and 3d performance?

Sorry, I can not discuss any of Matrox's plans. They speak for themselves. We, all of us, at Amiga Inc. are very excited by the direction they plan to take 3D in the games markets as well as with professional video.

A major ingredient for the success of the new Amiga will be the availability of applications and games. How many and what is being ported to or written for the VP? Are there many big software developers actively involved in software development, and how many would be original or enhanced, rather than just ports?

Can I suggest Id, Bullfrog, DMA Design and Electronic Arts for the killer games department :)

Again, I can't get into specific ports or games designs except to say that we have some very active games designers already working as I type this.

Paul Nolan was hired recently. What exactly is his role at Amiga? Will he be doing more than just GUI and interface design? Hopefully he'll do an enhanced Photogenics for the AmigaOne.

Paul Nolan is working with our internal development team on the new AmigaOE. I can't speak for Paul. He will have to talk about his future plans. I can say that I hope Paul ports Photogenics over.

What's the status with Matt Chamut (The Silicon Graphics artist). I'm hoping you'll still be using a version of his brilliant GlowIcons

(http://reality.sgi.com/mchaput_aw/) for the AmigaOne.

I have not personally spoken to Matt though I would welcome a chance to do so. I am not sure if anyone else has from Amiga.

Bill has stressed again that Amiga are to build hardware reference platforms for a desktop, a handheld (PDA), and a notebook (portable). Are Amiga also going to build any systems to sell direct to the public themselves?

Bill has repeatedly said that we are NOT a hardware company. I have no reason to doubt that.

As the Amiga OS is not hardware dependant, I assume that whatever Amiga suggest as a reference platform is just the best combination you think works best/fastest with the OS, and that pc manufacturers can still build whatever they want for it?

We have some ideas of where we want to go in the immediate and long term future and our reference platforms are designed to take us there one step at a time. The initial Dev Box specs were based entirely on our desire to have an affordable box for developers to get started from. In truth, we could have selected many different platforms because what we are building is platform independent.

In Team AMIGA, a number of initiatives were pursued to help Gateway's future (ha-ha) Amiga products. Of special interest were the efforts to create a disabled-friendly interface with computer speech (for blind people) and feedback, voice recognition (for blind people) etc., and also the piracy protection research. Have any of these been continued and are Amiga interested in trying to perfect and implement them?

Privacy and special needs are always important issues.

I'll take that as a yes then :)

Yes, these issues are on Fleecy's mind and he is developing the technology behind what we are doing.

All of life is about compromise. What have Amiga had to compromise on in the development of the AmigaOne?

Nothing that I am aware of so far. Our developmental process is unlike any standard procedure. Everyone contributes, everyone works, everyone believes. It makes it much easier to reach finished product that way.

I know you probably won't tell me, but what is left to be done before a

product can be shipped? :)

I take it that your ESP is back working again?

Not well enough or I wouldn't have to ask you the question in the first place :)

You are in control of developer support. What about the user groups, is anyone interested in helping them to help Amiga?

I am in charge of all support for Amiga Inc. actually. We have a user, user group and developer site almost finished. The dev site got good reactions from developers so my team is now working behind the scenes to bring in all the options necessary to run dev support under authentication.

The user and user group support sites will be totally open to all without any password protection. They will be open soon.

Do you foresee any difficulties when the AmigaOne range do get released?

While I try to be a realist, my cup is always half full. We make life what it is. I believe people will see it operate and want one.

Is there anything that the Amiga community can do to try and help make the Amiga a success again?

Offer support. We aren't doing this because we needed a job. We are doing this because we believe. Watch what we produce and then criticize if it isn't up to your standards, but don't criticize what you haven't seen. And always check rumours before spreading them. We will gladly answer any questions about any rumours floating.

What is Amiga's opinion of projects like the BoXeR? Is it a possible competitor, or an ally? And what about promising developments like the QNX one?

People get confused when they think in terms of "competition" and it is easy to understand why, but what we are building will run hosted or stand alone on so many hardware and software platforms that it really doesn't matter.

In what we can do, in what we are producing, we have no competition.

Finally, when do you roughly estimate, or hope to have a new Amiga based system on sale?

I believe Bill said Q1 2001 it WILL be out there. We have no intention of missing that deadline.

Any rough idea on how much?

Our original target is under \$900. (That's about 600 UK pounds, Ed.)

MorphOS

The first public beta version of MorphOS is out, could this be the future of the "Classic" Amiga?

For the past few years many Amiga users have been looking for the next step on from the current Amiga. The new system announced by Amiga Inc. has given many people a lot of hope but it is clear it will be quite different from current Amigas as we know today, even if it is in the same "spirit". This very change means that devices based on the new Amiga environment may not provide what everyone wants from their computer. However, as many of us are painfully aware the current Amiga hardware is quickly getting further and further out of date to a stage when many modern applications are not possible on the Amiga even if the software were available.

Over the last few years the concept of porting the existing AmigaOS to an alternative processor has been suggested on numerous occasions. However it has always seemed unlikely that such a major project could be undertaken unless it was by Amiga themselves (who of course are now committed to the new Tao based OS). There is also the legal problem that such a port would probably require access to the original source code, and even after the port was completed, software would need to be re-compiled to run on the new processor.

But now Ralph Schmidt (the guy behind Phase 5's PowerUP software) and a small team have produced the first beta version of MorphOS, which runs AmigaOS purely using the PPC processor on a PowerUP board. MorphOS side-steps the legal and software compatibility issues by running the existing code, both the OS and third party programs, designed for the Amiga's 680x0 series processor under emulation. Parts of the OS can then be ported to true PPC code over time while maintaining compatibility with existing programs. The first beta comes with PPC versions of some key OS modules including Exec and the utility and maths libraries. The

clever part is that the existing 68k modules of the OS and applications can seamlessly work with other modules even if they have been ported to PPC and vice versa. This means that one module (which could be a library or device or program) can be ported at a time and all the programs that use it will benefit. In fact as all programs use services provided by the OS to some extent they will get some speed benefits as more of the OS is ported even if they are never ported themselves.

Installation

The beta version is supplied as either a tar archive compressed with bzip2 or an lha archive. Once decompressed the files have to be manually installed onto an existing system partition with AmigaOS 3.x installed. The only new files that need to be installed are in two drawers called morphos and qstartup. Morphos contains the core files of the OS and qstartup contains a 68k program that restarts the Amiga into MorphOS and debugramdump which, as you might guess, dumps debug output to a file if MorphOS fails for any reason.

It is quite easily possible to setup a boot drive which can be used for both MorphOS and your standard Amiga usage, even if that includes WarpUP PPC software which is incompatible with MorphOS. Programs run from scripts like the startup-sequence and user-startup can be disabled when MorphOS is running by enclosing them in the following if statement:

```
c:version >NIL: "MorphOS"
if WARN
    ;68k mode
    ;start the hacks
endif
```

Several libraries and datatypes which have several versions, say WarpUP and 68k, if you want to use the Warp version when running standard AmigaOS you can also install another version for use

with MorphOS and add the suffix .elf. MorphOS's library handler will always load a library or device with a .elf suffix if it is available. This mechanism allows MorphOS only versions of various OS modules to be installed alongside their 68k counterparts.

True PPC versions of several libraries and programs are provided with this beta, the most important of these is CyberGraphX version 5. To use this and hence really to use MorphOS you need to have CgX 4.2 pre-release 7 installed. The version 5 libraries and drivers can then be installed alongside the 68k versions as described above although a slight change has to be made to the startup-sequence to prevent the PPC monitor drivers being loaded when booting in 68k mode.

Other true PPC programs supplied with this beta include GIF, icon, ILBM, PBM, PCX and picture datatypes, 8N1.device, newicon library and lha (although the version in the archive is broken).

Once everything is in place a script is provided which runs the startup program, after a few seconds the Amiga reboots and, all being well, comes up in MorphOS. If, as in my case, everything works the only difference you will notice is a pulsing of the power light which shows the MorphOS Exec is active (this can be turned off if you want).

Compatibility

The stated aim of MorphOS is to be compatible with all Amiga programs that run reliably on a CyberGraphX system and in my experience so far they are already a long way to fulfilling that aim. The docs warn of some hacks and patches that should be removed and list some applications that currently cause problems, however in general use I found my favourite applications ran without a hitch.

For example I used PageSteam 4 to

Takes Flight

By
Robert Williams



work on several of the pages from this issue under MorphOS. I was able to connect to the Internet via Miami, browse with IBrowse and read my EMail with Thor. In fact it was so good it was almost an anti climax, my Amiga went on working as normal.

Performance

On a purely subjective basis I would say 68k programs running on MorphOS reach roughly '040/40Mhz speeds on my 233Mhz CyberStormPPC. They are certainly considerably slower on than the '060 I am used to but in general performance is very usable. This speed assessment is backed up by several speed comparisons run by other users. This sort of emulation speed is an impressive achievement especially when you consider that the processors on the PowerUP cards are now several years off the state of the art and that the dual processor design meant several compromises in performance had to be made including the omission of level 2 caches. On faster PPC systems with cache and further optimisation faster than '060 speeds would seem possible.

Reports seem to suggest that most PowerUP PPC applications run at about the same speed under MorphOS as on the same system under AmigaOS. At first this seems odd, you might expect them to be faster under MorphOS as so much was made of the task switching overhead with the PPC and 68k processor combination. However under MorphOS all the 68k OS functions have to be emulated using up PPC CPU time where as under PowerUP commonly the

PPC was only being used for one PPC task.

Secondly many PowerUP programs, such as the Isis MPEG movie player, also have a component simultaneously running on the 68k which of course has to be emulated under MorphOS.

Limitations

The major limitation with this first beta release is that it does not support the Blizzard PPC's SCSI controller (the CyberStormPPC controller is supported) so those people with their hard drive or other important devices connected to their Blizzard are currently out of luck. Most hardware devices should still work with their existing 68k drivers running under emulation, however this timing critical area seems to be where most incompatibilities occur. Several devices are listed in the documentation as causing problems under MorphOS including the A3000 SCSI controller, A1200 PCMCIA hardware and the Fastlane ZIII SCSI board. A patch is provided for the Ariadne11.device enabling it to work correctly (which it does). The docs also state that most DMA hardware is likely to cause problems.

On the software compatibility front apart from hardware hitting games and older applications the main problem is lack of support for WarpUP, which mainly effects the new breed of 3D PPC games from the likes of Hyperion and Digital

Images. While The majority of PPC based applications and utilities are available for both PowerUP and WarpUP with the remainder being pretty evenly split between the two standards games developers have come down strongly in favour of WarpUP and the Warp3D 3D hardware drivers. Ralph Schmidt has stated that he will not develop WarpUP support for MorphOS but that it is probably technically possible, hopefully a talented coder will get on the case!

Conclusion

This initial beta of MorphOS is a fantastic achievement, it is remarkably stable and the 68k emulation shows a good turn of speed. At the moment it is very hard to say how successful it will be in the future, if MorphOS were ported to modern PPC hardware I can see many Amiga users, myself included, being very tempted by the thought of a fast, cheaply upgradeable machine running the software we love. However at the moment there is a distinct lack of such machines on the market. With IBM's POP (PowerPC Open Platform) boxes in an almost BoXeR like state of "just a few weeks away" for the last six months Apple is the only company shipping PPC hardware in volume. Unfortunately Apple are known to very cagey over the specs of their systems so MorphOS on a G4 Mac may not be possible without extensive hacking. The other avenue is the proposed PPC only accelerators for current Amigas but with Amijoe not expected until early 2001 will a big enough market still exist?

To find out more and to download the beta visit the MorphOS website at:

<http://www.morphos.de>

Acceleration!

Robert Williams gets and urge for more POWER!

It's hard to find any computer user who feels their machine is too fast, especially if they have been using it for a while. Frighteningly you soon grow used to a machine that seemed lightening fast when you first got it, and after a while you're craving for more speed. With no new Amigas available we can't buy a new system as many PC users do, so many enterprising companies (and even Commodore themselves) developed accelerator cards which hold a faster central processor to speed up existing Amigas. In addition to a faster processor many accelerators also provide various additional features. This feature aims to explain the basics components of an accelerator to help you decide which combination of features is right for you.

CPU

The key part of any accelerator is the Central Processing Unit, this is the micro chip that runs your software and controls the rest of the Amiga. From the start Amigas have been fitted with Motorola's 68000 series of processors which has gone through several improvements over the years, below are summaries of the main 68k processors used in Amigas and their accelerator cards:

68000

A Motorola 68000 CPU running at 7.14Mhz was the heart of the Amiga 1000, A500, A2000/1500, A600 and the CDTV. Several accelerators which replaced the original processor with a faster unit usually running at twice the speed, 14Mhz were available. The Supra Turbo 28 for the A500 and 2000 had a 68000 running at 28Mhz. All these accelerators gave a mild speed increase as they were still tied to the 7Mhz memory on the motherboard.

68020

The '020 was the first full 32bit CPU in the 68k line and was used in few Amiga accelerators as the '030 was available by the time the market really took off. Later the embedded controller version of the 68020 was used in the A1200 and several cheaper accelerators. Unlike the full '020 the EC version only has a 24bit address bus limiting it to 16Mb of address space (it was really designed to drive appliances

like washing machines which don't need huge amounts of RAM!) When all the devices which need to talk to the processor (such as the custom chips and chip RAM) are taken into account this only leaves 8Mb for Fast RAM.

68030

The '030 was an evolution of the '020, it added a built-in MMU and was able to run at higher clock speeds. All versions of the 68030 have a 32bit address bus giving them 4Gb of address space. The '030 was very popular with accelerator manufacturers, '030 accelerators exist for every Amiga (except perhaps the CDTV).

68040

This processor marked a major step-up in performance for the 68k family, it offers about four times the raw performance of an '030 running at the same clock speed (hence a 25Mhz '040 is still about twice as fast as a 50Mhz '030). The full '040 has a built-in MMU and FPU, integrating the FPU with the processor also lead to significantly increased performance over the external 68881/2 FPUs used with the '020 and '030. The main draw back with the '040 is its high power consumption and heat output, this means that 68040 based accelerators are best suited to big-box or tower Amigas. Having said that, several '040 accelerators have been produced for the A1200 and even the A500 and can be quite successfully used in the desktop case, however adequate ventilation must be provided to prevent over heating and usually an enhanced power supply will be required as the standard unit cannot cope with the power requirements of an '040 and other vital peripherals such as a hard drive!

68060

Apart from the 68010 which was a very slightly optimised 68000 the 68060 is the only 68k series processor not to be fitted as standard to an Amiga by Commodore, the reason being that it didn't become widely available until after the big C's demise in 1994. The '060 offered another big step in 68k performance, its fast clock speed (starting at 50Mhz) and improved design make it about 3 to 4 times faster than a 40Mhz '040. The '060 uses 3.3V as opposed to the 5V used by all previous 68k chips which makes it much cooler running than the slower '040. By the time the

'060 appeared Apple, the main user of high speed 68k processors, had moved on the Motorola's PowerPC RISC processor meaning that there was never a large customer base for the '060, especially the full chips with FPU and MMU which are usually not required in embedded applications. For this reason the '060 has always been an expensive processor and still is, five or six years after it introduction. A single '060 processor will still set you back about £150 today, and that's without an accelerator to put it on! Despite the cost the '060 is a great processor, it has few additional compatibility problems above the '040 and yet is very noticeably faster and is cool enough to run without a fan in most situations, even in A1200 desktops.

FPU

A Floating Point Unit is a processor specially designed to execute floating point calculations which are relatively slow for the main processor to deal with. To take advantage of an FPU a program has to be compiled to use one. However, many applications that carry out complex calculations, particularly 3D programs, benefit a great deal from an FPU and thus are compiled to take advantage of one. You will probably have noticed that many programs ask you if you have and FPU during their installation, this allows them to install the appropriate files to use the FPU while still remaining compatible with systems which don't have one. The 68000 processor used in the first generation of Amigas (the A1000, A500, A600 and A2000) did not offer an FPU. With the 68020 Motorola introduced the 68881 companion FPU, an additional chip. An upgraded version, the 68882 was introduced for use with the 68030 (although the 68881 also works). The 68040 and 060 were introduced with a built-in FPU and later EC (Embedded Controller) and LC (Lower Cost) versions of these chips were released without an FPU to reduce costs. As the FPU is embedded in the '040 and '060 an external FPU cannot be added later to the LC and EC versions.

The embedded FPUs in the '040 and '060 is much faster than the 68881 and 2, one

of the ways these speed increases were realised was to reduce the number of FPU instructions available, the '040 has less than the 68882 and the '060 less than the '040. However this can cause a problem with older programs that ceased development before the '040 and/or '060 were released as they continue to use instructions which are no longer present in the FPU. When one of these instructions is encountered it has to be emulated using a combination of available instructions which forces the CPU into supervisor mode. In this mode multitasking is temporarily disabled which can cause jerky mouse movement and also slows the processing down. To remove this problem Phase 5 introduced a program called Cyber Patcher, this patches programs which use the FPU as they are loaded replacing the most used non-implemented instructions with combinations of new ones to do the same job. This eliminates or greatly reduces the jerky mouse pointer and speeds up the applications. For users without Phase 5 accelerators a commercial program called OxyPatcher is also available which does a similar job.

Remember that any program that has a version optimised for the '040 or '060 FPU will not benefit from these patches as it will not use any missing FPU instructions.

MMU

The Memory Management Unit is part of the processor which allows the mapping of blocks of physical memory to virtual addresses. The AmigaOS does not require an MMU and very few programs make use of one. The only significant one I can think of is the VMM utility which tries to give virtual memory to the Amiga. Some people report good success with this, for example it allows them to render large 3D images without investing in loads of extra RAM they won't use for anything else. However with memory prices now quite low most Amiga users probably won't find a need for VMM especially as it can be unreliable. The other main reason for wanting an MMU is to allow your Amiga to run the 68k version of Linux which requires one. Motorola did not produce an MMU for the original 68000 processor (hence it was not used by AmigaOS), with the 68020 they introduced an external MMU chip called the 68551. With the 68030 the MMU was built into the processor chip itself and this continued with the '040 and '060. However many Amiga accelerators and the A4000/030 used the EC version of the 68030 from which Motorola omitted the MMU to reduce costs. As the MMU is part of these processors you cannot add one later, so be sure to check the accelerator you buy has a full 68k chip with MMU if you require one. There are also EC ver-

sions of the '040 and 060 but as far as I know these have never been used on Amiga accelerators.

Memory

In addition to the faster CPU one of the key reasons to add an accelerators is to increase the available memory, allowing you to run more complex programs and to multitask several at once. As you probably know the Amiga's memory (often referred to a RAM, Random Access Memory) is split into two parts, Chip RAM and Fast RAM. Chip RAM is accessible by the custom chips (hence the name) and is used for the display, sound and a number of other functions. The design of the AGA chipset limits chip RAM to 2Mb (older Amigas with OCS or ECS have a maximum of 512kb, 1Mb or 2Mb depending on the Agnes chip fitted and their motherboard), all A1200s and most A4000s were shipped with the full 2Mb. This means that an accelerator can only upgrade Fast RAM. This type of memory is only accessible to the processor, it is faster than Chip RAM because the processor does not have to compete with the custom chips for access. All accelerators currently available have some kind of memory expansion on board, in fact they cannot work efficiently with out it as Chip RAM or the RAM on the motherboards of the A3000 or A4000 is very slow in comparison.

PPC

With the 68000 series looking increasingly long in the tooth and no longer developed by Motorola many Amigans have been looking for the next step in speeding up their machines. In 1998 Phase 5 finally shipped their long awaited dual CPU CyberStorm and Blizzard PPC cards under the banner PowerUP!. These have both a 68k processor (either an '040 or '060) and a PowerPC RISC processor, Motorola's new main stream processor which is also used in Apple's Power Macs. Because porting the Amiga OS to PPC would take a long time and the intentions of the Amiga's owners (who were undecided at the time the PowerUP boards came out) were unclear these boards run Amiga OS on the 680x0 as normal and the PPC processor can be used by programs specially written to take advantage of it.

Various disputes (which I don't intend to go into here) between Phase 5 and Haage and Partner (one of the Amiga's key developers) lead to two mutually exclusive software systems being developed to run PPC software on the Phase 5 boards. PowerUP, the official Phase 5 solution and WarpUP from Haage and partner. Correspondingly some PPC software uses one and some the other system. The prob-

lem with this is that both systems cannot coexist, all PowerUP programs must be stopped to run a WapUP program, after which the system must be re-started to run a PowerUP program again. Fortunately over the years the PPC boards have been available the situation has settled down and now many programs are available in both PowerUP and WarpUP flavours, there is also a PowerUP emulation for WarpUP that allows many (but not all) PowerUP programs to run under WarpUP.

Overall there is now a worthwhile amount of software available for the PPC cards, especially if you are into games and fancy the likes of Wipeout, Heretic 2 and Hyperion's forth coming releases running on your Amiga. While the PPC cards themselves are expensive they do offer quite a lot, including a good SCSI interface (if you opt for it) and a connector for the B/CVisionPPC graphics cards.

Future PPC

The PPC processors used on Phase 5's cards have now been superseded by two new generations of PPC chips, the G3 and G4. The dual processor design not only adds to the complexity of the boards, it also means an expensive 68k processor is required and several compromises had to be made in the design (for example there is now level 2 cache) reducing performance. Therefore Several groups and companies have announced PPC only accelerators for the Amiga, which should be

68k Processors

The following 680x0 series processors have been used in Amiga accelerators. There may have been a few others but this should cover the vast majority.

Processor	FPU	MMU	Mhz Avail.
68000	X	X	8 - 28
68020	O	O	16 - 33
68EC020	O	O	16 - 33
68030	O	S	16 - 50
68EC030	O	X	16 - 40
68040	S	S	25 - 40
68EC040	X	X	25 - 40
68LC040	X	S	25 - 40
68060	S	S	50 - 60
68EC060	X	X	50 - 75
68LC060	X	S	50 - 75

Key

S = Standard
O = Optional
X = Not Available

both faster and cheaper to make (sounds good heh!). Sadly Phase 5's G4 offerings seem to have sunk without trace after their bankruptcy, which leaves Escena with their Brainstormer Zorro card, Metabox with the Amijoe and a possible Gx card for the BoXeR in the running. However now the Amijoe, the only one which has been seen in the flesh (at the Cologne show in '99), has slipped to the first quarter of 2001 it's hard to know whether any of them will actually see the light of day. If they do the good news is that running the Amiga on only a PPC processor has been proved possible by the amazing MorphOS (see feature on page 12).

Additional Features

SCSI Controller

Many accelerators come with a built-in SCSI controller or the option of a SCSI add-on, this can be a very useful add-on. SCSI allows you to connect upto 7 devices to your Amiga and can drive each one at the maximum speed of that device or the SCSI bus, whichever is slower. Attaching a slow device does not slow down faster ones connected to the same bus. Numerous internal and external SCSI devices are available including hard drives, CD-ROMs and CD writers, various back up drives (such as ZIP, JAZ and tape backups) and scanners. Most SCSI controllers connected directly to an accelerator card offer better performance than those connected to other interfaces (such as Zorro II or the PCMCIA slot) because they can be directly connected to the fast processor bus.

The performance of a SCSI controller depends on two main factors, its maximum transfer rate and the method of data transfer from the SCSI controller to the computer's memory. The maximum transfer rate is a multiple of 5MB/s, SCSI-I and SCSI-II both operate at 5MB/s, this is the most common standard for older Amiga SCSI controllers and devices like the Squirrel. SCSI-II Fast has a maximum rate of 10MB/s and is available on some accelerator's built-in SCSI controllers including most of the Phase 5 range. Finally the fasted available controller available for the Amiga at the moment is that on the Phase 5 CyberStorm PPC and MkIII fast slot accelerators, these have a SCSI-III wide controller which supports up to 40MB/s.

To DMA or not to DMA

With a DMA SCSI controller data is transferred directly from the SCSI chip to the Amiga's main memory with little intervention from the processor, this means the processor has much more free time to get on with other things while data transfers are going on, generally keeping the Amiga

usable during data transfers. DMA is also a big boon to activities like on-the-fly CD writing as the processor has plenty of free time to prepare the data for writing while other data is being written. The other option is a PIO (Polled Input/Output) controller, these use the processor to move data from the SCSI chip into memory and hence use much more CPU time during data transfers.

Accelerators with SCSI Options

Most (ex)Phase 5 accelerators have either built-in SCSI or a SCSI option, all Phase 5 controllers are DMA and in general they are fast and reliable. However make sure you get the latest version of the ROM with your board as older versions can cause problems with CD writing. Many GVP accelerators also come with a DMA SCSI controller built-in or as an option, even more so than with the Phase 5 controllers it is important to get the latest ROM revision to cope with modern devices. For some GVP controllers a new ROM called the GuruROM with software written by Amiga Guru Ralph Babel is available from Schatztruhe (the Aminet CD people) which enhances compatibility and reliability. Be particularly wary of the built-in SCSI and SCSI modules available for the Apollo range of accelerators not only are these PIO but they are also widely reported as working poorly with SCSI devices other than hard drives, for example scanners and cartridge drives. Most other Amiga accelerators on the market today also have PIO SCSI which is fine for less demanding use but a DMA controller is well worth it for applications which rely on fast, reliable data transfer such as CD-R, audio and video work.

Graphics Card

The only accelerator-specific graphics cards that have actually been produced, as far as I know anyway, are the B and CVision PPC cards for Phase 5's PPC accelerators. The Inferno graphics card was planned for DKB's Wildfire A2000 '060 card but never actually made it into production. However the PPC graphics cards are worthy of mention as particularly on the A1200 they offer one of the easiest routes to getting a graphics card. Also their Permedia 2 3D accelerator, however poor its performance may be against today's 3D chips, has allowed much more advanced, 3D accelerated games to be brought to the Amiga.

Specifics

A1200

As I mentioned earlier the 68EC020 processor used in the A1200 only has a

24bit address bus limiting it to 8Mb of Fast RAM. Worse than this if you fit a PCMCIA device such as a Squirrel or RAM card a further 4Mb is occupied, allowing for only 4Mb of Fast RAM. All 68k processors above the EC020 (including the EC030 commonly used on A1200 accelerators) have a 32bit address bus which provides 4Gb of address space. Most A1200 accelerators using these more advanced chips are designed so you can add much more RAM and map it out of the PCMCIA slot's address range. Unfortunately there were some cheaper accelerators which, even though they used an '030, still conflict with PCMCIA devices. If you need PCMCIA support or think you might want more than 8Mb of Fast RAM these boards should be avoided.

A4000

The A4000 was originally designed to be an '030 based computer, but it was released as an '040 with the Commodore A3640 accelerator card. The 3640 uses the memory on the A4000's motherboard and because this was not designed with an '040 in mind the memory performance is poor, much slower than many '030 based accelerators. The motherboard memory is also limited to 16Mb. Therefore almost all accelerators for the A4000/3000 fast slot have memory slots on board, because this memory is connected directly to the processor it is much faster than the motherboard memory and larger amounts can be added. The fast slot only has 128Mb of address space allocated to it so this is the maximum amount of memory that can be added to any fast slot accelerator.

A3000

The A3000 is very similar in motherboard design to the A4000 and has a similar limitation when an '040 or '060 accelerator is used with the motherboard memory (which is also limited to 16Mb). The fast slot was introduced with the A3k and thus most fast slot accelerators can be fitted. The main problem with the A3000 is lack of space inside the case, particularly



The CyberStorm PPC and CyberVision PPC graphics card are a tight fit in my A3000 desktop.

above the fast slot. The tray that holds both the power supply, hard drive and floppy drives sits about 25mm above the fast slot. Anything projecting from the top of an accelerator such as a heat sink or SIMMs mounted at ninety degrees will foul on the drive tray. Even if an accelerator does fit there is precious little room around the processor and SIMMs for air circulation.

A2000

Like some A1200 accelerators, some early A2000 boards used the 68k's address space of 8Mb, on the 2000 this causes even more of a problem as the Zorro II cards also use that space. For example if you had a 4Mb graphics card and a 4Mb accelerator there would be no address space for any additional memory in the machine. Later accelerators map memory into their own address space allowing for much more to be fitted. The A2000 has a CPU slot designed especially for accelerators although several companies bought out boards which fit in the 68000 CPU socket and could then be used on the A500 as well. Accelerators ranging from faster 68000s right up to '060 are available for the A2000 from a wide range of manufacturers mainly due to its popularity as a video machine in the US.

Other Amigas

Accelerators are available for almost all Amiga models such as the A500, A600

and CD32 however you have to ask yourself whether it is really worth spending money on these older machines where further expansion, for example adding a graphics card, is tricky.

Gotchas

There are a few things to watch out for when you're buying an Amiga accelerator, particularly on the second hand market.

GVP RAM

The American company GVP (Great Valley Products) made many accelerators, particularly for the A2000, while the majority of these are fine products and were highly praised in their time they do have one significant problem. GVP decided to use custom 64pin SIMMs in their products, at the time memory was so expensive that there was little difference in price between a GVP SIMM and a standard 72pin PS/2 SIMM (as used by most other accelerators). However now that RAM prices have dropped sharply the unusual GVP SIMMs are still very expensive. This makes the accelerators that use them pretty uneconomic to expand, so unless you buy one with all the memory you want already installed be sure to take the price of upgrading in to account when you buy. As an example a standard 16Mb 72pin EDO SIMM can commonly be found for about 20 pounds, a 16Mb 64pin GVP SIMM will cost you at least 75 pounds. A few later GVP products have 72pin SIMM

sockets or even both types and so don't suffer from these problems.

The Do ROM ROM

As I mentioned in the SCSI section be sure to get the latest ROM version with your purchase or if you can't make sure you can get a new ROM, this might involve arranging to get an appropriate ROM programmed yourself if the manufacturer no longer exists.

Check Compatibility

It's unusual but check that your new accelerator will be compatible with your current software and OS version, for example some older A2000 accelerators need particular ROMs to work with OS 3.1 ROMs and the CSA 12 gauge '030 for the A1200 doesn't work with 3.1 at all!

Conclusion

An accelerator will benefit almost all serious applications on the Amiga and many games too. There are many choices, and to a large extent how much you pay reflects the speed increase you get. It's well worth considering the long term implications of the accelerator you get, for example if you know you will want a SCSI controller in the future it may be worth paying a bit extra for an accelerator with a good SCSI option. If you're after a graphics card not having to buy a bus board may offset some of the extra cost of a PPC accelerator.

SysSpeed 2.6

By Torsten Bach

WWW: <http://www.aliendesign.net/util/moni/sspeed26.lha>
Aminet: [util/moni/sspeed26.lha](http://www.alienware.com/util/moni/sspeed26.lha)

Licence: Freeware

When you've installed your new accelerator, it's human nature to want to find out just how much faster it is than your old one (and than your friend's Amigas!). What you need for this is a speed testing program, and more importantly a speed testing program that supports modern hardware. Both AIBB and SysInfo used to be (and still are) very popular speed testing programs but they do not support more recent processors like the '060 and therefore can give misleading results. SysSpeed on the other hand supports both '060 and PPC and has tests for graphics card speeds as well.

In addition to raw speed tests such as

processor MIPS and memory speeds, SysSpeed also has a set of application based tests which should give a much more realistic view of a system's performance. These tests include loading files into then applying effects with ADPro and Image Studio, various text operations in Cygnus-Ed and GoldEd and crunching and decrunching files with various archivers. The only limitation with these tests is that you must have the programs involved to use them, however there is also the facility to setup tests using any external pro-

Test	You	A1200	A1200	A1200	A1200	Relative to A1200
Memory	19.19	19.19	19.19	19.19	19.19	1.00
Cache Read	24.24	24.24	24.24	24.24	24.24	1.00
ReadROM	46.97	37.13	4.76	10.48	11.79	0.25
ReadROMw	61.69	46.30	8.95	11.79	11.79	0.25
ReadROMr	26.74	23.22	2.47	5.95	5.95	0.25
ReadFast	37.51	30.95	4.72	10.48	11.63	0.25
ReadFastw	46.42	37.09	8.04	11.63	11.63	0.25
WriteFast	21.64	18.57	3.07	4.47	4.47	0.25
WriteFastw	21.13	18.57	3.07	4.47	4.47	0.25

SysSpeed's main window.

gram of your choice.

Once the tests have been carried out you can save the results as a module file, enabling you to reload it later and compare the results after you have bought some new hardware or made some optimisations.

The program has an attractive MUI interface which is dominated by the Test Results list view. Here your results can be shown next to four other modules, selected in preferences. The Compare column gives you the percentage comparison with one of the loaded modules, chosen from a pop-up menu. The statistics window shows the comparison in the form of a bar chart, again compared with up to 4 other modules. A System Info window is also available providing quite an extensive set of information about your Amiga's configuration and the programs currently running.

ADSL

(Asymmetric Digital Subscribers Line)

ADSL technology is now becoming widely available in the UK, it enables the service provider to use existing telephone lines (twisted pair) as a high speed data path, thus changing a network that was limited to voice/fax/modem too a impressive data transmission media, allowing excellent access to the internet and other new services such as video on demand (FMV), bi-directional video conferencing and remote LAN access.

This sounds wonderful but there are restrictions apart from the cost, as this technology is pushing the limits of a twisted pair of wires, between your home and the telephone exchange, the viability can depend on the distance and type of cable, (telecommunications cables vary in diameter and conductivity). So basically you need to be within 4km of the exchange, and if your over 6km then there is little chance of it working.

Once installed you are permanently on-line, so no more dialling up via a Modem.

The ADSL provides three channels:

1. A high speed data channel from the Exchange to your home. (downstream)
2. A lower speed data channel from your home to the Exchange. (upstream)
3. A voice channel for your normal phone calls. (POTS)

You can use your telephone to make a call while you are surfing the net, at the same time, that's magic!

The word 'Asymmetric' is related to the fact that the downstream speed and upstream speed are not the same the reasons for this are complicated, but simply a signal attenuates over a distance in a cable, the higher the data rate / frequency the greater the loss. Also crosstalk or overhearing occur when cables of very different signal levels are close together. So if we try to transmit at a high rate upstream it will cause crosstalk in other circuits.

Roy Burton, BT Engineer and SEAL Committee member, investigates the technology that could be the future of Internet access.

I don't want to get stuck on transmission rates because these will vary with company to company and circuit to circuit and will depend on many factors such as service agreements and minimum data rates that are guaranteed. Basically if you used a modem before, ADSL will rocket along in comparison.

ADSL supports speeds as fast as 9 megabytes per second downstream and 640 Kilobytes per second upstream, this is great for the internet which mostly needs bandwidth for down-loading information.

Advanced algorithms and signal processing allow as much digital information possible along a cable pair. Multiple Transparent synchronous data channels at various data rates divide the useable bandwidth of the pair. By use of FDM (frequency Division Multiplexing) for the upstream and downstream channels. The downstream channel is now divided by TDM (Time Division Multiplexing) and

the upstream is also multiplexed and a technique called echo cancellation keeps them separate. A 4 khz channel is assigned for the Plain Old Telephone Service (POTS).

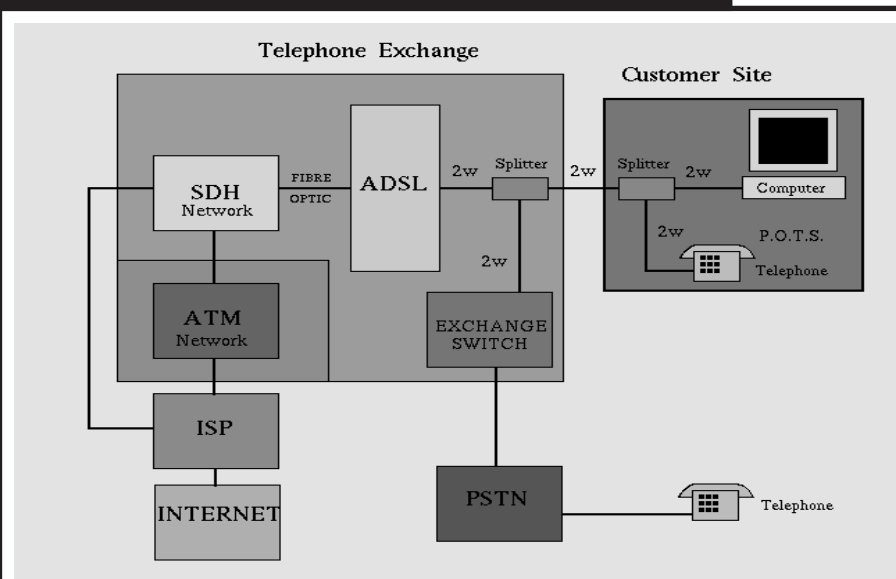
A splitter is a filter which separates high frequency (ADSL) from low frequency telephone (POTS) signals at exchange and at the customers home, the customers computer will be connected by one of two methods, the later being the most likely.

1. A Ethernet card.
2. A USB port connection with supplied software.

A 240v mains supply may be required at the customers site.

The ADSL technology is still being developed so expect improvements and cost reductions in the future.

ADSL Network Structure



KEY

SDH	Synchronous Digital Hierarchy (high speed Transmission network)
ATM	Asynchronous Transfer Mode (a high speed packet transfer technology)
ISP	Internet Service Provider
PSTN	Public Switched Telephone Network
POTS	Plain Old Telephony Service

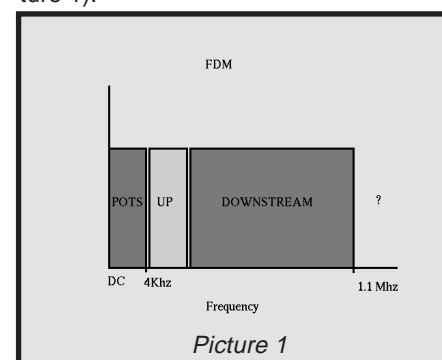
And now here comes the Science bit...

OK not too much!

ADSL use special modems, one at the Telephone Exchange and one at the Customer (combined with the Splitter) these are known as ADSL Transmission Unit, Central or remote.

Exchange = ATU-C
Customers premises = ATU-R.

So ADSL leaves 0-4khz bandwidth for the telephone service (POTS) and uses the rest of the available bandwidth for data transmission 20khz - 1.1MHz (picture 1).



ADSL uses a lot of processing power at the Exchange and equipment to enable use of complex algorithms which in turn give full use of the available bandwidth and to adjust these algorithms for varying line conditions such as noise and interference, this is made possible with the use of a Digital Signal Processor (DSP). Forward Error Correction is used for optimal performance and is based on Reed-Solomon coding.

ADSL uses Rate Adaptive Technology to adjust the data rate throughput in its current environment this is mainly done by the use of Discrete Multi Tone (DMT) signalling.

DMT can be described as dividing the available bandwidth into a number of sub-channels in fact 256 channels in the downstream each 4khz wide, channel 64 is a pilot and is used as a clock for the receiver. The maximum theoretical throughput is 15bits per sub-channel:

Number of sub-channels (256) x
Number of bits per channel (15) x
channel bandwidth (4khz) =
15 Mb/s downstream.

The number of bits vary per channel and would normally be much less say 5 bits.

There are 32 sub-channels in the upstream (channel 16 is reserved as a pilot).

DMT can use the channels to transmit data and is able to move data so that the usage of the sub-channels is maximised. If a channel cannot be used it can be switched off. All sub-channels carriers are multiples of one basic frequency.

DMT on initialization it determines the maximum reliable throughput, this is done by measuring the line characteristic by sending an equal value tone down all sub-channels (picture 2).

The receiver measures the multi-tone signals thus gathering information about the line, this optimized distribution information is returned to the transmitter back down the line at a safe low speed. With this information the transmitter knows how much data can be put down each of the sub-channels and what power level is needed for each sub-carrier.

The line adaptation of ADSL means the number of bits given to each sub-channel can be changed or the transmit power adjusted to aid performance with-

out interrupting the flow of data. The line conditions are measured on at regular intervals and any adjustments are made depending on the resulting changes in line conditions.

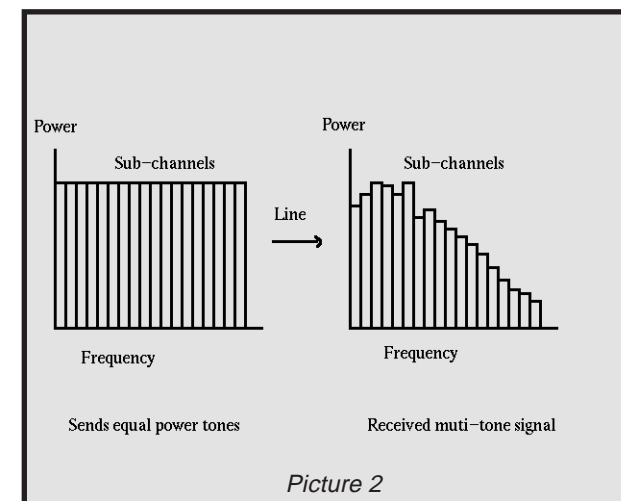
The DMT channels are modulated by Quadrature Amplitude Modulation (QAM) this uses two high frequency modulation carriers of the same frequency but with a 90 degree phase shift (quadrature) and are each amplitude modulated to carry information (data) down a sub-channel.

The data is sent in frames synchronized at 4000 baud DMT symbol rate (ADSL) and a sync symbol is added to each superframe = 68 ADSL data frames that are encoded and modulated into DMT symbols.

Well that last bit lost me!

By the way Ping times for ADSL are between 2 and 20 ms, and the term ADSL was named by Bellcore in 1989.

Please note some ADSL systems use Carrierless Amplitude Modulation Phase (CAP) instead of DMT. CAP is Similar to QAM but cannot be optimized and has not been standardised.



Internet Links

BT	http://www.bt.com/adsl/
Demon	http://www.demon.net/adsl/
Freeserve	http://www.freeserve.net/highspeedtrial/adsl.htm
Alcatel	Manufacturers of ADSL modems. http://www.alcatel.com/telecom/adsl/keytech/adsl/modem/mod.htm

Something Fishy

Reviews are very subjective, what one reviewer may love, another hates. Such is life. So we decided to have a general score, which the reader can take into account along with the text.

So we invented the fish... it's easy to work out which we feel is a better product... the more bones that show, the smellier the fish :). We only award our top Caviar rating to products that are practically perfect.



Caviar

The best so far! We can hardly pick anything out of it, not even boogers. Rarer than Nessie.



tasty

This product is definitely worth buying but, like most things, still has room for improvement.



FISHY

Average, neither too good nor too bad — it works but there are areas which need major improvement or are way behind competing products.



SMELLY

Crap, but hopefully getting better in future versions (if there are any).



ROTTEN

Disgusting, multicolour yawn inducing abomination that insults the Amiga.

PageStream 4

Robert Williams reviews the Amiga's one and only DTP app.

PageStream is one of the Amiga's oldest (and I would say certainly the oldest surviving) applications, and largely due to Clubbed, one of my most used programs. Version 4 has been out for quite a few months now, and as we have come to expect from Softlogik it took a few revisions to iron out the worst of the wrinkles with the initial release. This in no way reflects badly on Softlogik, where PageStream is developed almost single handed for three platforms by Deron Kazmaier who does an amazing job. Now up to release 7 version 4 is looking good. As this is the first time we have looked at PageStream in Clubbed I have tried to cover the program as a whole, not just the changes for the new version.

Interface

PageStream's interface isn't particularly beautiful, in many places it is not font sensitive and uses the dreaded Topaz, however it is functional and doesn't require an add-on GUI engine like MUI or ClassAct (which may or may not be a good thing depending on your point of view). The main document window shows a WYSIWYG view of the current page of your document and there are several floating palettes which you can choose to have open to control various aspects of the document. The action centres around the toolbox which controls the current mode of the program, there are buttons for the edit pointer, text mode, and several drawing tools. Along the top of the screen (by default) is a user definable button bar. Initially there are buttons for loading and saving documents, cut copy and paste, preferences and other common operations, you can add buttons for almost any function in the Preferences window, however you can only have one button bar and it is always a horizontal strip.

You will probably want to have the edit palette open all the time you are using

Product Information

Developer: Softlogik
Distributor: Blittersoft
Tel: +44 (0) 1908225454
WWW: www.softlogik.com
www.blittersoft.com
Price: Full £169.95
 3.3 - 4.0 u/g £59.95

PageStream, it provides a different set of options depending on the current edit mode and the type of the current selection. For example if you are in text mode and have the cursor in some text it shows the current font and size and allows you to change it. If you are in pointer mode and have an object selected the object's current size and position are shown and can be edited. Most numeric values in the edit palette have nudge arrows which you can click on to increase or decrease the value in small steps. One slight oddity with the edit palette is that you must press Enter twice for changes made by editing values (the nudge arrows work immediately) to take effect. This is due to the way the AmigaOS handles text gadgets (the first Enter confirms the text typed, the second activates an "Apply" button), however it can be useful because you can make several changes in the edit palette and apply them all in one go saving several redraws.

The document and page palettes allow you to control the arrangement of your document. In the document palette you manage the chapters and master pages and the page palette allows you to move whole pages, including all the objects they contain, around in the document. This is achieved by simply dragging and dropping icons. The Page palette can also be used to group pages together in page spreads and select which master page applies to each page in the document.

The options available in the edit palette along with the other palettes mean that you very rarely have to open a requester in PageStream which greatly speeds up layout creation and editing. Keyboard short-cuts are another strong point. The most common object related ones are just a single key press, for example pressing "I" brings up the Line and Fill requester for the current object and "a" opens the alignment requester. One slight oddity is that the short-cuts are different in text mode are different as typing a single letter will just enter that letter. So for example the line and fill requester for selected text is brought up using CTRL+I.

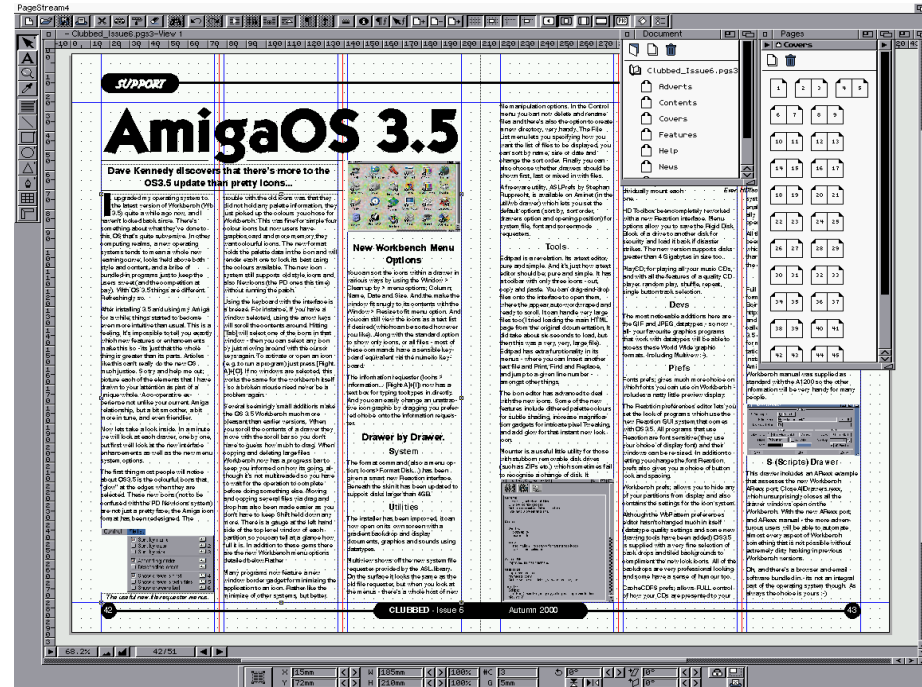
In Use

When you first start PageStream or if no document is loaded the navigator window appears, this has buttons allowing you to start a new document, load an existing one or Quit. Also shown in this window is a

random tip, most of which are actually quite detailed and useful. The File menu also contains these options and a handy list of recently loaded files (one of the few Windows features I wish more Amiga programs would "borrow"). If you start a new document a requester allows you to select a page size, layout (single or double sided, facing pages) and margins. You are then presented with a blank page (except for a grid and a few guides) on which to build your document.

Text can be added to the page in two ways, firstly you can select the text frame tool then draw a text frame on the page. Then you can import or type text into the new frame. The second method is to select the text tool then just click on the page and start typing. This creates a floating text box that expands to hold the text you type. Resizing a floating box stretches the text inside (you can retain the aspect ratio by holding shift), you have to press Return to get a new line. In a text frame you can only resize the text by actually choosing a new font size in some way. The text in a frame automatically wraps when it reaches the edge of the frame or column, if there is too much text to fit in the frame PageStream displays a small overset marker at the end to warn you. Text frames in PageStream can have more than one column and a configurable gutter (the space between columns) which makes multi-column layouts quicker to set-up and edit. One minor limitation is that you cannot set a gap between the border of the text frame bounding box and the contained column(s) of text, this means if you apply a border to a text frame the text butts right up against it, an easy work around is to draw an additional box with the border and fill you want and place the text frame over it with no border or fill applied.

Like most DTP programs PageStream is really designed to assemble content created in other applications, for example the main text of articles is probably better written in an editor or word processor and then imported into a document. It is possible to enter text directly into PageStream but it is noticeably slower than say Final Writer when editing long articles. This is quite understandable as the complexity of layout possible is much greater in PageStream, editing long articles is also faster in version 4 than in 3. Import modules are supplied for most common Amiga text formats including Final Writer and Wordworth, they all simply import the text and some of the styles rather than the document formatting. A simple HTML module has been added for version 4, this loads HTML pages keeping simple formatting like , <I> and line breaks but does not attempt to keep any formatting or inline images. Similarly the HTML saver ex-



A typical screen while I'm working on Clubbed. Notice the customisable toolbar along the top of the screen. The Page and Document palettes give a graphical overview of the document.

The edit palette at the bottom of the screen is in text column mode.

ports only simple text formatting, however this could actually save quite a lot of time when preparing a HTML page based on a PageStream document, but don't expect it to recreate your page layout in HTML!

At some point during the development of PageStream 3.x the spell checker stopped working, fortunately (especially for me) it has now been reinstated in version 4. Unfortunately (for those of us in the UK) currently there is only an American English dictionary, still it's better than nothing and helps spot the worst of the typos in headings and the like which can't be easily checked in another application.

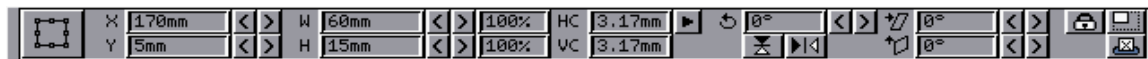
Fonts

Several types of scalable fonts are supported including the Amiga's native AGFA Compugraphic, PostScript Type 1, the custom fonts used by PageStream 2 and TrueType fonts as used by Windows. Fonts can be sourced from any directory on the system so it's easy to make PageStream share fonts with other programs even if their font directory is hard coded. A pop-up font selector is available in the edit palette but this does not show you how the font looks. For this you need the font requester which shows a preview of the selected font, unfortunately this does not show a snippet of the selected text just AaBbCc etc. One particularly nicely implemented feature is the insert character requester which shows all the characters in a font very clearly so you can pick unusual ones, it also shows the keyboard short-cut for that character so you can type it quickly.

Styles

Styles help you to add consistency to a document and allows its whole look to be changed easily. PageStream 4 offers three types of style, character, paragraph and object. A Character style holds all the information about how a character looks, for example its font, size, colour, whether it is bold or underlined etc. A named character style can be applied to any range of text from one character to several paragraphs. A paragraph style applies to one or more whole paragraphs, this allows it to hold settings such as the line spacing, whether the paragraph has a drop capital or is bulleted etc. Object styles apply to objects rather than text (as the name might suggest) and allow you to easily apply common settings such as border and fill to objects. The great thing about styles is that once some text, paragraphs or objects have been assigned a particular style if you change that style all the objects assigned to that style also change. For example if you had assigned all the body text of all the articles in your document to the same style you could change the font used by all the articles in one step. Character and paragraph styles can be easily applied from the Edit palette when in text mode or you can use the Styles palette. Object styles can be applied from a sub-menu of the Object menu, they should also be shown in the Styles palette but I couldn't get that to work.

If you're working on a simple document (perhaps a poster) where styles seem



The edit palette provides the appropriate controls for the object selected.

overkill PageStream also offers a useful format dropper on the toolbar. This lets you Shift click on a piece of text or object to pick up its formatting then simply click on another piece of text or object to format it in the same way. In version 4 there is also a new find and change attributes feature which allows you to find text formatted in a particular way and change it to a different format or to a style (from then on it will change when the style is changed).

Graphics

Graphics in a wide range of formats can be imported into a PageStream document, bitmap formats like IFF-ILBM, JPEG, BMP, PCX and GIF are supported and you can also use a number of vector formats such as IFF-DR2D, ProDraw Clips and EPS. One very useful feature is that graphics can be "left external". This means that only a low resolution preview image is shown on screen while the full image is only loaded from disk when required, for example when the document is printed. Only the low resolution For Position Only (FPO) image is stored in the document and loaded into memory while the document is being edited reducing the file size and memory requirements. The default resolution of the FPO can be set in preferences and adjusted for a particular image in the Information requester. At any time an external image can be fully loaded if you

need to see it on-screen at full quality. Another advantage of keeping images external is that if you edit the source image and save it over the top of the old file the changes can immediately be seen in PageStream. Version 4 has a new collect for output feature that allows all the external images used in a document to be collected into a single directory so the document can be easily moved to another machine or sent for printing. It is also possible to turn off image display to speed-up document editing although you can't have some images displayed and others switched off as you can in Final Writer.

Once imported images can be sized (either keeping or ignoring the original aspect ratio) and rotated to fit into the layout. There is a crop tool so you can remove unwanted borders from an image without having to load it into an image processor. Images can be masked using any shape that can be created using the drawing tools so you can have non-rectangular images and make simple compositions within PageStream. Unlike many other packages you cannot set a particular colour in an image to be transparent, for example a white background. This is due to a limitation of PostScript which does not support transparency, there is a function which tries to automatically create a mask thus removing the background, but I have found this only works successfully on simple images. I have found it best to create complex compositions as a single image outside PageStream (often in ImageFX using layers) and then import the end result.

Any structured drawing format that can be displayed in PageStream can be dissolved into its separate objects and edited within PageStream using its drawing tools, this can be very handy if you need to make minor changes to clip-art. Adobe Illustrator EPS files can be viewed and edited within PageStream, other EPSs are displayed as a crossed box and can only be printed to a PostScript printer.

Drawing Tools

In addition to the text facilities PageStream also has a powerful set of drawing tools allowing you to add structured graphics to your document. All the common tools are available such as line, box, polygon and bezier curve. A variety of line and fill styles is available including gradient fills, there is also a choice of arrow heads and other line endings. PageStream also has most of the facilities of a full structured drawing program including the ability to join and merge structured objects and to export the drawing in various file formats. The TextFX 2 module gives you many text effects to

play with including wrapping text onto a curve and into shapes and a very wide range of predefined warps. It also allows you to convert text into an editable drawing object, ideal for making logos. Even without TextFX you can use the range of fills and line styles on text as well as drawn objects.

Both a grid and guides are available to help you neatly align objects (be they drawn or text boxes) on the page. The grid is user definable and you can set it to start at an offset from the corner of the page. Horizontal and vertical layout guides can also be set up. A requester allows you to enter an exact position or you can set the guides visually by dragging from the top left hand corner of the rulers onto the page. This second method was new in version 3.4 and makes using guides much quicker. It would be even better if you could adjust the guides after placing them by dragging in the ruler, currently you have to open the requester.

Document Structure

Many facilities are available to help you create long and complex documents. A document can be split into chapters each of which can have a different page numbering convention. Master pages can be used to define common elements which appear on every page, for example, page numbering, headers, and footers. The master page also controls the page size and layout guides for the page so you could have a master page with a 3 column layout and another with 2. Multiple master pages can be used so, for example, you can have different headers and layouts within a document or even some pages of a different size. Pages can be set as double sided which allows you to have different right and left master pages and additionally facing pages can be set which allows you to edit page spreads on-screen. In the page palette you can then drag pages together to form spreads. PageStream allows you to pull more than two pages together to create fold-out sections or multi-fold booklets easily.

Automatic creation of tables of contents, included images and indices is also a boon if you're creating a big document. These tables can be easily refreshed at any time so they always reflect the current layout of the document without tedious checking and renumbering when you move items around in the layout.

If you're producing a magazine, like this one, or a booklet that is to be printed double sided and folded the built-in signa-

Here it is in object (left) and character (right) modes



ture printing is for you! PageStream 4 will now move the pages around as it prints so the right pages come together when the sheets are put together and folded. You can also use repeat printing to print multiple copies of a document on one page, for example you could create one label then set repeat printing to print a whole sheet.

Output

You would expect an application whose purpose is to produce printed documents to have extensive output options and PageStream doesn't disappoint. The printing (or more accurately output as it doesn't only print as we'll see) system is controlled from two windows. The print window allows you to set the generic options such as which pages are printed and in what order, whether to print in greyscale or colour etc. Pages can be scaled to fit on smaller or larger paper so, for example, you can test print an A3 document on A4 and you can print thumbnails of the entire document.

The Printer Settings window defines output type specific options, the options available depend on the output module selected, modules are supplied to output to Amiga OS Printer drivers, PageStream's own printer drivers, PostScript devices and IFF-ILBM bitmap files.

Print quality through the Workbench driver suffers from all the usual problems, especially low colour quality because the pre-OS3.5 printing system for which PageStream is designed only supports 12bit colour. If you have TurboPrint or Studio installed things are better due to the optimised drivers for modern printers, but they still only have 12bit colour data to work with.

PageStream specific drivers are supplied for a range of reasonably modern printers with HP and Epson models particularly well catered for. The quality produced by these is significantly better than using the Workbench drivers because they use 24bit colour data. However, I find the prints tend to be a bit dark and heavily dithered compared with the same page printed via the Studio output module or Turbo Print and the GhostScript add-on.

If you own the Studio printer driver package you will be pleased to know that Wolf Faust, its author, has developed a PageStream printer module which outputs direct to Studio supported printers at full 24bit quality. With this module PageStream will give the same output quality as Studio's picture printing utility.

PageStream offers extensive PostScript output options as befits a professional package. Firstly, you load a PPD (PostScript Printer Definition) file which tells the program the capabilities of your postscript device. PageStream can then output full colour PostScript, CMYK colour separations and or separations for any spot colours used. If you have Turbo Print 7 you can send PageStream's PostScript output to the PS: device which is picked up by GhostScript, rendered then passed to TurboPrint to be printed at full 24bit quality. This works absolutely brilliantly giving fantastic quality on any TurboPrint supported printer.

The PostScript output module can also be used to save an EPS file of a page to disk, this allows a complete page to be included in another document although in many applications, including PageStream itself EPS files can only be printed to a PostScript printer. One limitation is that you cannot output a whole document as several EPS files, one for each page, all in one go. You have to "print" each page to an individual EPS file otherwise PageStream seems to try and put all the pages in one file which is not valid as EPS files can only contain one "image", or page in this case.

The IFF-ILBM output module saves each page as an IFF-ILBM image, you can choose the resolution of the output file, the number of colours or greyscales to be used and if required a dither pattern.

Colour Quality

I have heard it mentioned by people who know what they're talking about that PageStream does not output as accurate quality colour PostScript as professional publishing solutions on other platforms. Apparently this is due to the built in RGB to CMYK conversion routines and some example output I have seen bears this out. I cannot go into this area in any more depth because I do not have in depth knowledge of these issues, however in my experience if you intend to output from PageStream to a local printer attached to your Amiga using Turbo Print or Studio the output is excellent. Output to PostScript also works well as is shown by this magazine which is produced in that way but may not be quite up to the level of some applications on the PC or Mac (which generally cost much more).

Add-ons

A simple text editor called PageLiner and a simple Image Processor (BitMap Editor or BME) are supplied on the PageStream 4

CD. Both of these are quite adequate at what they do and allow you to prepare PageStream documents without any additional software. Most users will probably have other software that is more powerful (GoldED, ImageFX and Photogenics being my main choices) but it is a nice touch none the less.

Documentation

As far as I know PageStream 4 is not currently supplied with an up-to-date printed manual, you still get the one from 3.3. This is pretty good and covers the most important features although some of the new ones could certainly use proper explanation, for example I had to work out the signature printing by trial and error. Also supplied is quite extensive HTML documentation, complete with Softlogik's own browser, HHV. The HTML documents are, like the manual, not totally up-to-date and contain mostly reference material, explaining what all the menu items and requesters do.

What's New In Version 4

During the course of this review I've tried to point out some of the new features in PageStream 4 but there are a few I haven't managed to mention yet. Drag and drop text editing lets you quickly move blocks of text around, even between text frames, with the mouse. Definable tracking tables and kerning pairs let you tweak specific fonts and pairs of letters to get the spacing perfect while optical alignment improves the look of blocks of text. One of my favourite new tools is the lasso selector which selects all the objects within a free-hand shape, this makes complex selections on pages with lots of objects much easier.

Conclusion

PageStream is an excellent application, I've been using it pretty heavily for a long time (as is evident by this magazine) and generally have had very few problems and can't think of many things I'd like added. The current release of version 4 seems pretty reliable and has an amazing range of features. I can't say how it compares with its professional competitors on other platforms but on the Amiga it is very worthy of the king of DTP crown.

Results



A Complete Fiasco Or is it?

The dictionary says that Fiasco is “a complete failure”
Robert Williams thinks different!

Computers are good at remembering things, something that this human, and I suspect most others to some degree, are not good at! The job of a database is to store up information in a structured way and allow us to recall it quickly when needed. Because the Amiga has been primarily a home and creative computer few databases have been created for it over the years, in the heyday of the late 80s and early 90s there were some powerful products like Superbase but sadly many of these are now looking their age if they even work on a modern Amiga. Fiasco is a database designed along the lines of a modern Amiga programs and unlike some of its other PD and Shareware siblings it offers a good amount of power too.

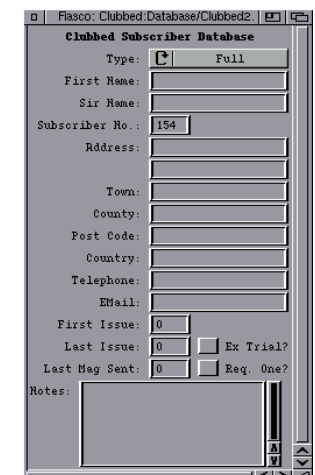
Fiasco has two modes, Mask mode is used to setup the database, you can design the layout of the record window and define the fields you want, their type and options. Once the database is designed Record mode allows you to enter data into the database and then perform various operations to extract the data you want. You can drop into Mask

mode at any time to adjust the structure of the database, Fiasco warns you if any change you make could corrupt your data.

In Mask mode you can add new fields to the database by selecting the field type from the Field menu or a cycle gadget in the control window. A cursor, which can be moved with the mouse or cursor keys, shows where the new field will be placed, this is achieved by pressing Return. A requester with the options for the selected field type then appears, after the options have been set, the field then appears in the Record window. The fields in the Record window can be simply reorganised by dragging them with the mouse, and double clicking on a field opens its options window for editing. Fields can be multi-selected by holding the Shift key and/or with a drag box which makes editing the layout quick and easy. One slight annoyance is that a label is not added to each field as it is created so you have to add them manually using the special “Text” field type.

Fields

A wide selection of field types are available in addition to the standard ones like string (a piece of text up to defined number of characters) and number. The date and time fields ensure that dates and times are always input in a consistent format and can be used for date based calculations. The Boolean (Yes/No) and Cycle fields types are particularly nicely implemented as a check box and a cycle gadget in the record window which makes the final record window look like a “proper” Amiga appli-



This blank record from the Clubbed database shows many of Fiasco's field types.

cation. In a similar vein the Variable Text field type that allows you to add longer pieces of text to a record, ideal for notes and descriptions, is implemented as a scrollable text box, like a mini editor. The datatypes field type is one of the most interesting, the only data actually held in the database is a reference to an external file, which is then shown in a scrollable of the record window using datatypes. Probably the most common use for the datatypes field will be to add images to a record, however because datatypes are available for so many file formats you could also include other files like AmigaGuide documents even sounds.

Similar to the Text field type, the Button type does not actually add a field to the database, it is used to add an action button to the record window. Buttons can be used to run any program that can be launched from the shell or an AREXX script. As the actions of an AREXX script are entirely up to the user, it could make changes to the database using

Product Information

Developer: Nils Bandener

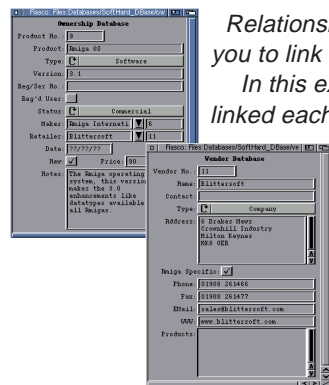
E-Mail:
nilsb@amigaworld.com

WWW:
www.amigaworld.com/support/fiasco/

Address: Uhlenbruch 30,
33098 Paderborn,
GERMANY.

Price: 30DM (about £10)

Paid by: Cash, EuroCheque
or Bank Transfer.



Relationships allow you to link databases. In this example I linked each product to its supplier, there for I only have to enter each supplier's data once.

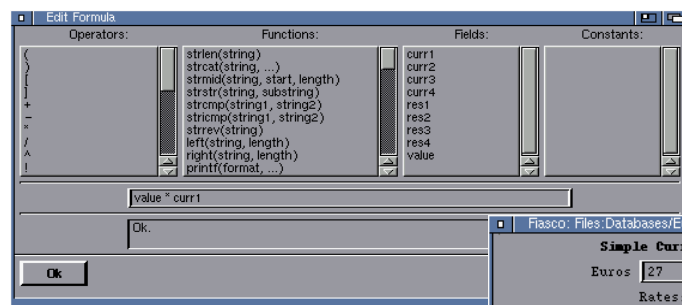
Fiasco's AREXX port or control an external program. With buttons, along with the other field types you can use Fiasco to make a complete database application which looks very similar to any style-guide compliant Amiga program.

Defaults

All field types allow a default value to be set and Cycle type fields can be used to limit the choice to a defined list of options. Fields can also have their value calculated by a formula. If a formula is added to a field it will be used to set the default value when a new record is created, and if it uses values from any other fields in the record, will be updated if those fields change. A formula generated field can also be set as virtual which means its contents are never stored on disk and always generated on-the-fly. To help you create formulas Fiasco has a very nice formula editor window where you can pick from lists of the available operators (+, -, *, <, > etc.), functions (including string handling, statistical and date related), fields and user defined constants. It even checks your finished formula for errors before accepting it!

Printing

Choosing Print from the Project menu opens a blank window very similar to the Record window, you can add the fields from the database that you want to print



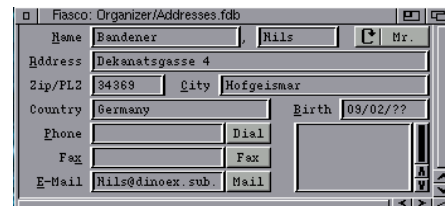
The Formula Editor makes adding calculations to your database easy. I knocked up this simple currency converter in a few minutes..

and place them in any order. If you so desire you can put fields on several lines to fit them all on a page. When you print each record it is printed using the layout you have set-up. There are options to add headers and footers to the printed database but I couldn't find any way of adding variables like page number, print date etc. Printing is plain text only so you are reliant on the only simple formatting (bold, underline etc.) and the fonts built into your printer. An AREXX script is provided to output to the TeX formatting system (commonly found on Unix systems) but you have to install and configure it yourself. For many jobs the basic text output is fine and you can always export data from Fiasco then use the mail merge function of a word processor for more complex formatting (Wordworth is particularly good as it allows multiple records per page).

Relationships

A simple database with one set of data, for example names and addresses or album details is commonly called a flat file database because it resembles a file with a card for each record. Fiasco is a fine and flexible flat file database but it can do much more than that. Relationships allow you to link several sets of data together. First you have to find a field which is common in both the sets of data, then when the databases are linked, a record in one database with be related to all the records in the other database where the linking field contains the same data.

Time for an example I feel. If you were running a business you might keep a database of orders received. Instead of entering the customer details each time an existing customer placed an order it would be nice to pull them straight out of a customers database. To do this the orders database could be linked to the customers database with a relationship, for example the linking field might be



Despite all the other options Fiasco also works well for simple databases like this address book.

customer number. When a new order is raised the customer number would be entered and the customer's details would automatically appear from the customer database. If the customer's details ever changed all the records in the orders database would automatically show the updated information. The previous example is a many to one relationship, many orders can be from the same customer. Fiasco also supports one to many relationships, in our example you could add a list view field to the customer database showing all the orders that customer had placed.

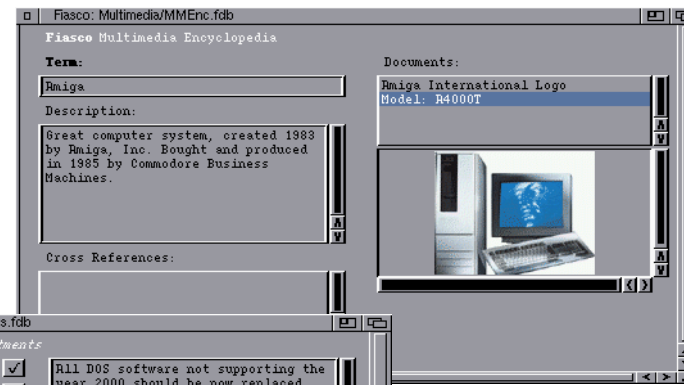
Although Fiasco does not offer as many options with its relationships as large scale databases (for example you cannot choose to have an average (or other calculated result) of all the matching records in a one to many link) on other platforms they are very useful and add a lot to the program.

Data Entry

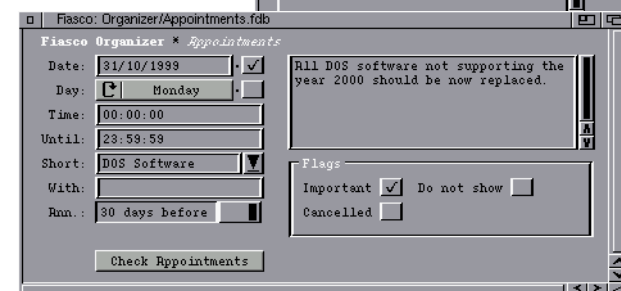
All data is entered through the Record window, while in Record mode. The Tab key can be used to move between fields and keyboard short-cuts can be assigned to checkbox and cycle gadgets to allow them to be accessed from the keyboard. There are also short-cuts for moving between records and adding new ones so you don't have to take your fingers off the keys when doing a lot of data entry.

Indexing, Sorting, Finding and Filtering

Once you have designed your database, created any relationships and actually entered some data you may actually want to retrieve it! Fiasco holds the database on disk and only loads the records you are currently working on into memory. To speed up working with large amounts of data Fiasco allows you to create indices for the fields you commonly search, query or sort on. An index is a list of values in those fields which can be held in memory for quick searching while the full records reside on disk.



The example databases supplied give you a good idea of what can be achieved with Fiasco and a little AREXX magic.



There are several actions you can perform to manage your data and find particular records. The sort function can be used to sort (surprise, surprise) the records into ascending or descending order based on any field. You can have as many sort criteria as you have fields, so in our example orders database above you could sort on customer and then by date.

Find allows you to search for a particular record in the database, for example you could look for records where with a particular surname in an address database. The first match to a search is shown in the Record window and you can use the Find next and previous menu items to step through all the matching records. You can search on multiple criteria (where the sir name is Williams and the first name is Robert for example) and you can use logical operators for example where the surname is not Williams or where the order value is > (greater than) 10000.

The Filter window is very similar to the search window because they perform a similar function. Filtering limits the database to displaying only the records which match the criteria you specify which again can use logical operators. Filters and searches can be saved once they have been defined and can be recalled easily from a pop-up gadget in their respective windows.

There is also a Statistics window accessible from the Database menu which gives general information on the current database like the number of records and the number loaded into memory.

One feature of Fiasco you have to get

used to is that, like some EMail programs, records are not really deleted from disk when you click the Del button. Physical deletion takes place when you select Reorganize from the Database menu. Another slight oddity is that a Fiasco database is not one file, when you save a filename.fdb file is created along with a drawer called simply filename which holds all the other ancillary files, which include saved searches, indexes, filters and print layout files. When moving a database or backing up you have to make sure you get all the files.

Aside from Fiasco's own format a flexible export module allows databases (or just marked records) to be saved in a variety of ASCII formats. The field separator, string delimiter and record separator characters are all freely configurable so it should be possible to export to almost any database or other applications such as word processors and spreadsheets. Likewise most databases on the Amiga and other platforms can output suitable ASCII files for Fiasco's importer which is similarly flexible.

Documentation

Fiasco comes with very comprehensive Amiga Guide documentation including a reference section which covers all the windows and menus. The right section for the active window or menu item can be quickly accessed by pressing the Help key. The documentation starts with an introduction to Fiasco and basic database concepts. It then carries on to explain how these concepts are implemented in Fiasco and how they can be used. This part of the documentation is helpfully split into sections for simple

and more advanced uses of the database so if you only want to create a simple address book you don't get bogged down in unnecessary details.

Programmability

If you have more complex requirements than can be satisfied by the built-in functionality Fiasco has an AREXX port with a wide range of commands. AREXX commands can be used to retrieve data from the database, perhaps to pass to other programs, and to add new data. They can also be used to control various aspects of the user interface. Custom functions for use in calculated fields can also be written.

Conclusion

Fiasco is an excellent and flexible database for all sorts of home and small business uses. It has some surprisingly powerful features with printing the only area that feels underdeveloped, fortunately this can be worked around. Relationships, a comprehensive AREXX port and powerful functions mean it is possible to develop full fledged database applications in Fiasco. For all the powerful features it is also ideal for simple address book type projects where you want to be in charge of exactly what data you keep! Although it does take a bit of learning, especially if you are not familiar with databases, the excellent manual is very helpful. With a registration fee of only about 10UKP it represents great value too!

Results

Pros

- Elegant font sensitive interface
- Many powerful features
- Comprehensive documentation
- Very customisable and flexible
- Excellent value for money

Cons

- Limited printing support without additional programs
- Necessarily quite a complex program





Double

Elliott Bird and Mick Sutton both review their

Sony Multiscan 210ES

When my Microvitec 1701 Amiga multi-sync monitor died earlier this year I was absolutely gutted, it was a very nice monitor indeed and coped with all screen modes both graphics card and AGA output with no troubles whatsoever, and it had cost me £350 at the 1997 World of Amiga show!

So a replacement had to be found, and when I spotted the 17" Sony Multiscan 210 ES in PC World for £249, I thought to myself oh well just gonna have to buy myself a new monitor so here goes.

THE MONITOR The monitor itself is approximately the same physical dimension as the old Microvitec with a diagonal viewable screen measurement of 405 mm (17" approx) and a depth of 405 mm (17") from the very back of the monitor to the very front, so as you can see plenty of desk space is required!

Like pretty much all monitors it sits on a swivel and tilt base enabling you to set up the monitor to your viewing requirements, it has an on/off switch (very handy) and four buttons on the front (more on this later).

Round the back it has a kettle style socket which gave me my first minor

problem, because I didn't have any spare socket outlets available, and my last monitor had a lead which was hard wired at the monitor end and plugged into the power pass through in the back of my tower, and therefore didn't require a free socket outlet. So a quick trip to Maplins and I got myself a lead with a kettle style male one end, female the other so I could just plug the female into the tower and the male into the back of the monitor. One thing that strikes you about this monitor is the screen looks dead square and totally flat vertically, with only a slight curve to the screen horizontally (like all Sony Trinitron tubes).

The technical specifications of the monitor are quite good with a maximum resolution of 1280 x 1024 and an aperture grille pitch of 0.25 mm (the Microvitec was 0.28 dot pitch). Refresh rates (the number of times per second the display is redrawn) of up to 120 Hz are available well above the 70 Hz minimum recommended.

The monitor is controlled by an on-screen menu system accessible via the four buttons on the front of the monitor. Contrast and brightness can be instantly accessed for quick adjustments that are

Approx £240 • <http://www.sony-cp.com/>

needed (must see those sinister dark areas in Quake!) all other options are in the main menu. A wide variety of options are available including the usual screen size and positioning, but there are many others that you can fiddle to your hearts content such as pin cushion (screen edge curvature), key balance (to keep the display square), rotation, zoom (scales display with aspect ratio fixed) and colour (allows adjustment of RGB values to match printed colours).

My normal screenmode is set (in CgX mode) to 1024 x 768 at 75 Hz which I find suits the monitor and gives me a stable and clear display. I must confess that when I had the Microvitec monitor I thought that the display on that was "perfect", but when I fired this baby up it felt like I had just been given a new set of glasses to the "correct" prescription! The detail was much sharper and possibly I feel the colours are more vibrant, couldn't wait to load up Photogenics! This is one monitor I can definitely recommend, maybe the old monitor dying wasn't the worst thing to happen after all, just expensive!

By Mick Sutton

Internal Scandoubler

£59.95 • (01642) 713185 • <http://www.eyetech.co.uk/>

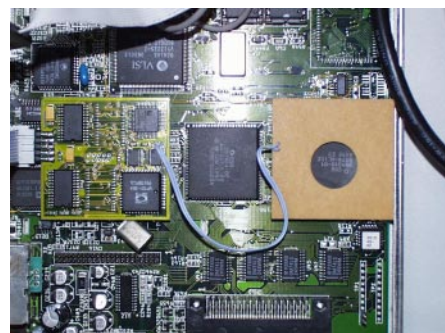
The one major disadvantage of SVGA monitors compared to my old Microvitec 1701 is that they cannot display screenmodes below 30 Khz such as PAL or NTSC. These screenmodes are often used by games and many old applications. Most of these applications have now been replaced by newer versions, but there are many games (even recent titles such as T-Zero) that demand these modes.

Due to the fact that I still wanted to play my old games (Tornado, TFX, SlamTilt

and T-Zero etc) it was necessary to get myself a scandoubler. What does a scandoubler do? It doubles the scan rate of course! Making 15 Khz PAL screen 30 Khz funnily enough which is ideal for an SVGA monitor.

So I decided to get the Eyetech A1200/A4000 Bmon compatible internal scan doubler which costs £59.95. (ADPT-VGA-INS2D)

This scandoubler is basically a two part device, by that I mean one section is a circuit board with a PLCC socket on one



The internal scandoubler fitted (The PCMCIA slot is at the bottom of the image)

Vision

SVGA monitor and Scandoubler combinations.

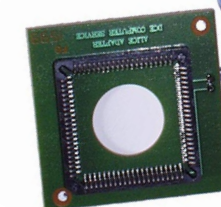
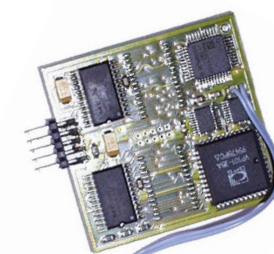
side and components mounted on the other, whilst the other part is just a PLCC socket mounted on a little bare board with just a thin cable connecting the two together (be careful how you handle this baby!) Also included is a ribbon cable with IDC connectors both ends which attach to the scandoubler at one end and the supplied 15 pin HD socket (standard VGA connector) the other. You will need a suitable cutout in the back of your tower as a blanking plate is not supplied!

So then lets get this thing working eh!

First thing take your tower cover off to expose the motherboard, then press the board with the components on it over the Lisa chip until you feel a crunch (on mine I had to carefully move a component to one side) and it is firmly in place. Next place the other socket over the Alice chip and again push home

hard James! I found it best to place something hard under the motherboard to support it firmly whilst pushing on these sockets otherwise the motherboard may flex a little and the socket may not seat fully over the chip. Once these two parts are in place, you connect the ribbon lead to the component board and the VGA connector.

If you have a BMON (as I do), it is possible to connect a ribbon cable from the Scandoubler to the BMON, but not using the supplied ribbon cable. As I discovered, the connections are wrong for this particular configuration, so I connected the supplied cables via the 15 pin connectors and tested with a multimeter to see what the correct connections were. I found a simple straight through cable was all that was required (the supplied cable had several wires cross over which is fine for non BMON configurations)



The first thing I did to check the Scandoubler was to boot the Amiga with the two mouse buttons held down to get to the early start-up screen (not forgetting to switch the BMON to AGA mode of course) to make sure all was well, and indeed it was! One of the things I noticed was no horizontal black lines, as I used to have when I used the Microvitec monitor in AGA modes (yippee! Games are gonna look so much better). So now time to carry on booting and get stuck into my favourite AGA games (TFX & SlamTilt) and wow what a difference, clear and sharp at last!

By Mick Sutton

ScanMagic External

£69.95 • (01234) 851500 • <http://www.powerc.com/>

There are two options to take, when upgrading to a newer monitor for your Amiga. You could buy one of Microvitec's or NEC's Multisync/multiscan monitors which can sync down to the Amiga's native screenmode output of 15KHz, hence you wouldn't need a scandoubler, but this tends to be the pricey option to go for, but I don't think it's possible to buy a multisync, that syncs down to 15KHz, brand new nowadays. Or you could buy a nice cheap SVGA monitor and a scandoubler with or without a flicker fixer, such as Power Computing's ScanMagic scandoublers. This particular one we are reviewing is the external version, with a flicker fixer.

There are a few advantages to having the extra flicker fixer unit, such as the fact that you'll be able to display your workbench in "PAL:High-res Laced",

without the irritation of the flickering. You'll also be able to do without MagicTV, so you'll also be able to run your workbench in more than 16 colours, as MagicTV2 restricts you to 16 colours.

But you're not just restricted to the standard Amiga PAL screen modes, you can also use "Multiscan:Productivity", "DBLPAL", and a few others, as they run at higher frequencies, which are displayable on an SVGA monitor (providing you have these modes in your "DEVS:Monitors" drawer, along with the "VGA only" mode), and the ScanMagic scandoubler will let these modes pass through, untouched. But ScanMagic doesn't seem to like "Super72" at all, but I don't think it's exactly a popular screenmode anyway.

There are several features that most people will notice about ScanMagic. The



obvious one being that it's "See Through", so you can see all the chips inside, that double the scans. You will also notice two lights inside, the green one tells you that it is doubling the scans from 15KHz to about 30KHz. The red one tells you that the flicker fixer is working to stop the flickering of a laced screen. The lights obviously won't come on if you are running in a screen mode of a higher frequency, which is obviously normal. You may notice a switch on the back of the scandoubler unit, which adjusts the sync delay, to make it com-

patible with more monitors.

The external ScanMagic scandoubler is extremely easy to use, you just plug it into your video port on your Amiga, plug your monitor into the VGA type port on the scandoubler, and there you go, ScanMagic does the rest of the work for you, it could'nt be easier.

There are a few flaws with ScanMagic. Firstly it is quite bulky and takes up quite a bit of space, I would recommend you

allow about six inches of space at the back of the machine for the scandoubler. Another disadvantage with the external ScanMagic is the fact that it gets very hot, especially if you are running on a screen mode with a higher frequency. And you will probably notice some faint verticle lines on your screen, which is more noticable in some colours than others.

I would recommend this external version of the ScanMagic scandoubler to people

ViewSonic E655

ViewSonic E655 Nowadays there are so many different monitors to choose from on the market, VGA, SVGA, and Multiscan, and they are improving and gradually coming down in price. That's why I thought it was time to upgrade from my existing eight year old Commodore 1084S Monitor, which I got with my A500 plus. At that time most of my friends had A500s and A600s, but they were all plugged into the TV so the quality was never good, which was why I always appreciated the crisp clear display of the monitor.

But times have changed, people are buying larger monitors, more people are demanding higher resolutions and most people now have graphics cards and the fact that monitors are now more affordable. Anyway, I thought it would be worth a visit to a local computer fair one weekend to see what they had, and it was there that I noticed a 17" ViewSonic monitor on display. It gave off a very soft, non-flicker display. I was quite impressed so I purchased a 15" ViewSonic E655 monitor. I took it home, bearing in mind I could'nt plug it straight into my A1200, obviously, so I ordered a VGA adaptor the next day from Epic Marketing.

Getting it to work with your Amiga As I said before, you need a VGA adaptor (available from most Amiga dealers at around £15) to get the monitor to work with your Amiga, as is the case with all SVGA monitors, unless you have an A3000, or are using a graphics card. But I would definitely recommend a Scandoubler because they allow you to display all screenmodes on your SVGA monitor (reviewed next issue). You then need to have the right screenmodes in your Devs/Monitors drawer, which include "VGA only", "DBLPAL", and "Multiscan", all of which can be found in

your Storage/Monitors drawer. And finally, don't forget to change the screenmode on your workbench screen to one of the VGA modes, otherwise your SVGA monitor will be useless, because, obviously, it will not display the Amiga's standard PAL screenmodes, so a scan doubler is a must, preferably with a flicker fixer.

What Next? Ok so you're about to choose which screenmode you're going to use. I would recommend Multiscan Productivity as this gives off a nice soft resolution with little or no flickering. You may notice that you might not be able to adjust the screen to the full width of the monitor but this is normal, and seems to be a small problem on most monitors. "DBLPAL" seems to be a bit of a problem with this monitor, if you're not using a scandoubler that is, the monitor does'nt seem to detect the screenmode very well, and when it does, it's not exactly a "Rock steady" resolution, so I would stick with Multiscan. So now you're ready to use your SVGA monitor.

The Monitor Overall, the monitor gives off a very clear display and seems to work ok with my Picasso II graphics card on my A4000, and displays most of its screenmodes. Obviously you are bound to have some problems when it comes to using a VGA adaptor, though as long as you have mode promote selected on the IControl prefs then you should be ok when it comes to loading games and various applications from your hard drive, that have their own public screen. The monitor itself comes with a free CD-ROM which contains various screen-savers, the CD-ROM is not Amiga friendly, but it does work with any Mac emulator. The monitor is extremely stable thanks to its specially designed swivel stand, so the monitor isn't wobbling while you're fiddling about with the monitor settings, which is done thanks to

with desktop Amigas, such as the A500, A600 and A1200, but it is possible to fit the internal version in desktop Amigas, but it tends to be more "hacky", and also the internal version is priced the same as the external one, so really, you are getting more for your money with the external version. There is also the advantage that Power's ScanMagic scandoublers are £20 cheaper than Eyetech's EZ- VGA scandoublers. Internal or external, the choice is yours.

Approx £110 • <http://www.viewsonic.com/>



a unique on-screen menu. The specially designed swivel stand also makes it easy to move the monitor about (up and down, left and right). The one thing I do miss is the internal speakers that I had on my 1084S, which were handy when my Amiga went on its travels, at home I have the amiga's native sound coming out of my hi-fi, which isn't ideal for travels. Though there are monitors out there with speakers mounted on the sides. There are also power saving modes on this monitor which are quite useful, when the power saving modes are active, the LED light is yellow and the monitor is using 5-15 watts, and there is no output from your computer. There is a utility on the aminet, DPMS Manager, which takes advantage of this feature. But even when the monitor is fully on, it only uses 80 watts, which is less than most monitors, and therefore it does not get so hot, even when left on for long periods.

I would probably recommend this monitor to anyone who has a miggy with a graphics card, and anyone who still uses a 1084S or similar monitor and is thinking of buying a graphics card in the near future.

By Elliott Bird

Virtual GrandPrix

The thing that the Amiga is lacking in, is a decent racing game. Although there were lots of them released in the miggy's heyday, including MicroProse F1, they are rather outdated, compared to today's standards. But we really need more racing games, preferably for high end Amiga users, as well as the users with low end machines, i.e. a bog standard A1200, and Virtual GP is just one of the few games with this advantage. Although the minimum spec is an Amiga with an 030 processor, 4mb ram, CD-ROM and Hard Drive, it also caters for the high end user, i.e. graphics card, 060 equipped machine.

Marks, set, GO!

Virtual Grand prix is based on the 1998 F1 season, and has pretty much the same 22 cars and 16 tracks, as in a normal Grand Prix. Starting the game is relatively simple, you can run it straight from the CD, or you can install a small part of it from your hard drive and start from there. When you do start Virtual GP, you are greeted with a nice intro, (which only works on CD-ROM drives of 16x and above, but it can be skipped by holding down your left mouse button on the Epic screen). Then you get an intro screen, where you click and get your

Product Information

Developer: Paolo Cattani
Distributor: Epic Marketing
Tel: +44 (0) 1793 514188
WWW:
<http://www.epicmarketing.ltd.net/>
Price: £20

menu (and an annoying womans voice). You have the option of having a race, free practise, or a qualifying session. Then you have a choice of track, including Monaco, Silverstone, Melbourne, Monza, and many more. Once you have chosen your track, a screen will pop up, showing the track map, and it's stats. You also have some commentary from a commentator who sounds just like Martin Brundle. From there you go to the pits, where you have the option of adjusting the game preferences, adjusting the balance of your car, or you can just get on with the race.

Virtual GP is extremely configurable, so you can change anything on the car, such as tyres, teams, etc. Also even how you control your car, i.e. joystick (analogue or digital) or mouse, but joystick is preferable. If you are a novice driver, like myself, then you can have help on the track, i.e. alignment corrected if you should skid or crash off the track.

One thing you may notice on the race track is the advertising and the drivers' names, which have sneakily been changed slightly, due to the fact that the game is not an official FIA licenced game, which is understandable, as it would've been rather expensive, and considering that this game is only £20, which is very good value for a game like this.

Vroom Vroom!

As far as driving is concerned, practise makes perfect. It is quite difficult to get

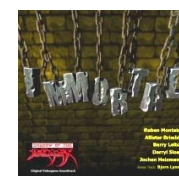


to grips with driving an F1 car, but that is down to car balance, tyres, etc. The sounds are quite realistic, especially the engine sound, which I quite liked. As you can tell, when your driving in the actual car, you are seeing things from the driver's view. You can also drive the car from various camera views around the car, but it can be a little more challenging, especially for a somewhat novice driver like myself. If you know your F1 (as well as a good driver) then you'll get familiar with this game very quickly.

Final Lap

So, in conclusion, Virtual Grand Prix really is a must for all F1 enthusiasts. Even though I'm not particularly an F1 enthusiast myself, I did find it enjoyable to play, as it is extremely playable. What lets it down is it's documentation. There is apparently going to be a PPC version to look forward to, as well as various updates, which have already been released on Aminet.

By Elliott Bird



Immortal CD

Memories like the corners of my mi... errr where was I? Oh yeah.

The Immortal CD is a collection of some of the best Amiga games music created by the likes of Ruben Monterio, Barry Leitch and Alister Brimble. From the atmospheric Shadow of the Beast intro, it begins its musical journey through five other tracks from the above mentioned game. These include Erie Forest, The Cavern Beast Stronghold, Underwater and finally Game over. Ah the memories flood back. Your musical history lesson continues with the likes of the guitar

based Dafel: Bloodline and the piano stabbing Project X99 to the jolly and bouncy Superfrog. It really makes you realise what good songs there were in the old Amiga games.

There's a few songs I was hearing for the first time, but they were instantly catchy like The Strangers and Blockhead II. All in all this is a very good compilation which comes on a professionally pressed CD in a crystal case and printed inlay sheets. I should also mention the excellent rendered .mpg film included on the CD which is used to introduce the composers of the tracks.

18.99USD (about £12) from
<http://www.monteiro-music.com>

Whether you want to catch a piece of nostalgia of the Amiga in its hey-day, and hopefully there'll be another one soon, or you want to keep a record of some of the Amigas game music history. Go get it.

Jeff Martin



At eo Concepts

A4000 Tower

Robert Williams gives his A4000 desktop a new home.

You can pack an amazing amount into an A4000 desktop, 2 hard drives, 2 floppies, a CD-ROM, a PPC accelerator and graphics card all on top of the 4 Zorro cards. Unfortunately before you get anywhere near its maximum capacity the interior gets very congested with cables, limiting air flow. For some time I've had my SCSI CD-ROM and EZ-Drive in an external case with my scanner daisy-chained on the back. When I ordered my PPC card I found out that SCSI III was unlikely to work over such a long cable, I was also worried about the heat build-up as the PPC card (with its two processors), CyberVision PPC graphics card and hard drive would all share the same cramped space in the middle of the computer. So it seemed like a good time to towerise my 4000.

There are loads of different tower cases available for the A1200, but if you have a 4000 your choices are much more limited. Both Micronik and Eagle from Germany made A4000 towers but their cases include new 7 Slot Zorro boards which increase the price of the cases considerably, both of them came in at about 300UKP. As I have no need for extra Zorro slots, even less so now I have a CyberVision PPC graphics card, I didn't want to spend so much. At the time I was deciding which tower to buy the A4000 Power Tower had not been announced so the only other option I found was the Ateo Concepts A4000 tower. After taking a look at the Ateo Concepts web site I placed my order.

Looking at the pictures on the Ateo site I expected a midi tower with 3 5.25" bays, when my tower arrived it turned out to be a huge full tower with 5 5.25" drive bays. The tower comes with a base plate to give it extra stability, a kit of fixings and instructions in English and French. The instructions are very brief and the translation is



Next to my 17" monitor you can see just how big the tower is.

difficult to understand. There are a couple of diagrams but more detailed step-by-step instructions with photos would have been a big improvement.

The first step is to take the A4000 apart, this presents no problems as long as you have a screwdriver and a socket for the port hex bolts. The A4000 has to be completely dismantled to get at the motherboard, the only part that is left behind is the power supply which is replaced by a beefier 230W one in the tower. You even have to retain the support at the back of the case which holds the Zorro card blanking plates (this just unscrews) and the central strut that holds the Zorro card riser. With all the parts out of the case you're ready to re-assemble them into the tower.

The back panel of the tower has cutouts for all the standard A4000 ports, in the same places as the original case. Before it is fitted to the case 6 mounting posts with sticky fixing pads are clipped through the mounting holes of the motherboard. The original isolating film is left in place. The motherboard is then fitted in place by fixing its connectors to these cutouts with the original hex bolts. If you fit the hex bolts loosely you can then peel the backing paper off the sticky pads with the mother board in situ. The motherboard is then pushed back against the side plate of the tower. The side plate is unmodified from the original PC application, which is why adhesive fixings have to be used rather than the more normal mounting posts. Once the motherboard is in place the Zorro riser can be fitted. The docs seem to recommend fitting the riser with your Zorro cards and the back plate pre-installed. We did eventually manage to fit it in this manner, but it was very difficult and took two of us to get everything lined up and attached. I have since had the tower apart again and fitted all the parts separately with no problems.

In the Ateo tower the Zorro slots face the base of the case, there is little room to manoeuvre the cards into and out of their slots, however it is possible even with large cards like my CyberVision 64 graphics card as long as there isn't another large card in the slots above the one you want to use. Another problem is that it's difficult to get to the blanking plate screws unless you have a very short screw driver as they are so close to the bottom of

the case. Fortunately in the base of the case opposite the screws is a ventilation grill, I clipped away some of the grill bars so I can get a full size screwdriver onto each screw through the bottom of the case. Because the tower uses the 4 slot support from the A4000, there aren't any spare slots for connectors mounted on blanking plates. I would have liked to see some cutouts on the back of the case for additional connectors like these, but it only comes with exactly the same cutouts as an original A4000.

To hold the Zorro card in place the tower uses the A4000's original bracing bar, in my tower this was a very poor fit. At one end it attaches to the blanking plate support removed from the A4000 and at the other to a plastic bracket installed by Ateo. In my case the holes mismatched by at least 5mm and the bracket was about 3mm too high. I did finally manage to get it to fit by packing the bracket with washers and forcing the case out until the holes lined up. Once in the A4000 installation feels sturdy but it was nowhere near as easy as the A1200 towers I have helped build.

The LEDs on the front of the case are attached directly to the headers on the A4000 motherboard, I used the turbo light on the tower for my internal IDE and the hard drive one for my SCSI activity indicator. Power for the motherboard comes direct from the new power supply, to which Ateo have fitted the correct connector. There are several connectors to power hard drives and floppies but nowhere near enough for a device in every bay, so if you've got lots you'll need to buy some "Y" adaptors. The fast slot on the motherboard is partially behind the 3.5" drive bays, however these can be removed for easier fitting of an accelerator. With both the

Product Information

Developer: Ateo Concepts
Distributor: White Knight
Tel: +44 (0) 870 7405278
WWW:
<http://www.ateo-concepts.com/>
<http://welcome.to/white-knight/>
Price: £149



CyberStorm MKII and the PPC you'd have to remove the bays to fit more memory too. With the PPC accelerator both processors are uncovered so there won't be a problem with air-flow for cooling. The CyberVision PPC also fits with no problem (the layout obviously hasn't changed from the original 4000) but I would recommend using a stronger insulator than Phase 5's thin card one as the card rests on the sharp pins of the riser when mounted in the tower.

Inside the layout is very similar to the original machine, right down to the Expansion opening at the back so you shouldn't have any problem fitting upgrades, as long as they fitted in a standard A4k. While the 3.5" drive bays sit roughly where the 5.25" one did in the original case (over the fast slot) the area where the original power supply was is free. Fitting devices is easy, they screw in directly rather than using rails. Unlike the old A4000 case there's plenty of room to route cables although no clips are supplied to help you do so. As the 3.5" drives sit over the accelerator it's important to route their cables so they don't impede air-flow over the processors, again there's plenty of room so it's no problem.

Conclusion

For what you actually get I think the Ateo A4000 Tower is rather expensive, especially compared to the A4000 Power Tower which offers a 7 slot Zorro bus board for only about twenty pounds more. At the time however if you didn't want to pay for the extra Zorro slots in the Micronik and Eagle alternatives it was the only option. If Ateo had used a better quality case I would have been much happier. As it is all you get for your 150UKP is a less than 50 quid retail PC tower, a custom backplate and a few fixings. Compared to A1200 towers which include keyboard interfaces and usually a custom motherboard carrier and a backplate for less money I'm not too impressed. I think also that most of my fitting problems were down to the quality of the case as with a bit of brute force it went together quite well.

On the plus side the case is huge with loads of expansion space (it scores here over the Power Tower which only has three 5.25" bays) and once in the A4000 motherboard and standard upgrades fit well. In use the tower performs as expected.

If I were buying a tower for my A4000 now I would look seriously at the Power Tower

which seems excellent value. If I were Ateo I would either use a better quality tower to base the conversion on, which should ease fitting problems as well as making a better end product, or reduce the price to reflect what actually goes into the conversion.

Results

Pros

Relatively Cheap
 Loads of expansion space

Cons

Very brief instructions
 Fitting requires some ingenuity
 Fitting Zorro cards is tricky
 Uses cheap PC tower case



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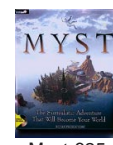
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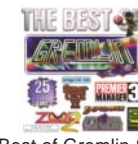
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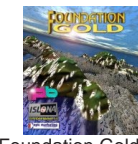
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Heretic 2

At last it seems that our game playing prayers are being answered, first with Wipeout 2097 then Quake GL, and now Heretic II from Hyperion, and if you think this is a one off then think again as they are already forging ahead with new titles such as Shogo, Sin and Descent Freespace.

This is just the sort of game my Amiga has been crying out for, ever since I have upgraded her (whoops sexual reference to my beloved machine there!) to PPC and Bvision graphics card about eighteen months ago.

Heretic II is very similar to the Tomb Raider series in that it is in third person perspective (where you are looking at the character, usually from behind and above) with puzzles to solve (although not too hard) and lots of enemies to kill. The hero of the game Corvus can climb, crouch, roll, jump, swing on ropes, swim (on surface and underwater), walk, run, creep and of course kill opponents in several stylish ways using a whole multitude of weapons and spells.

Sounds good, lets take a deeper look shall we?

Firstly, we have some pretty heavy hardware requirements to run this game, but in some ways I think that it is good because it just might get some people who were considering upgrading their machines to now just do it!

Tell Me What I Need!

So here are what you need to get this baby to run.

- BlizzardPPC/CyberstormPPC or better AGA or GFXboard
- 64 MB RAM
- WarpUp V4 installed (included)
- Warp3D V3 for hardware accelerated rendering (included)
- Quad-Speed CD-ROM drive (600k/sec. sustained transfer rate)

Hard disk drive with at least 290 MB of space available for the program. An additional 100 megs is needed if you wish to install the movie files to your hard drive (390 total, max install). And if you want to get the best from the game I recommend the highest speed CPU (mine is a 240 Mhz) 96Mb RAM or more (I have 128 Mb) and a Warp3D compatible video card (such as the BVision), also for ease of control I also recommend a three button



The whole game, including these menus is very polished and professional.

mouse but normal two button mice work fine as do joysticks (digital).

Some further options are also supported, sound cards via AHI (optional) and network and internet play via TCP/IP (in my case Miami) which I must say works very well indeed.

Got That, Let's Install

The game comes packaged in a box and includes a manual (wow just like the old days) written in both German and English, and is on two Cd's (just put in CD sleeves) with your serial number printed on the box. I found that this was rather nice (being in a box that is) but for fast access to this wonderful game, I have myself put the two Cd's in a twin jewel case with a scanned in cover and the serial number printed on the back (sorted).

The installation uses the new OS3.5 installer if it is available so you get a nice shaded backdrop and a Heretic II logo. If you select the expert install option you can configure various aspects of the hardware 3D renderer, these are not for the faint hearted as some of them could make your Amiga unstable but are quite well explained in the installer's help. The minimum installation is a whopping 300Mbs which increases to 450Mb if you install all the in-game movies. Strangely the data seems to be archived on the CD and is decompressed as you install. As you can imagine this amount of data takes quite a time to copy onto the harddrive, and if you cock up the installation you have to do it all again! So make sure you have your serial number handy, and I found I needed to update to version 48 of the ixemul.library which was not on the Heretic II CD (available from Aminet).

Load It Up

When you load the game a GUI is opened where you are able to set various options such as your CD-ROM device and unit number (required as CD B is in your

Mick Sutton finds out if Hyperion have come up trumps with this eagerly awaited port.

machine all the time you are playing), a use mouse option (which I use) and screen type which include Double or Tripple buffered, PIP Display (picasso 4or CV64/3D), Workbench or AGA. There are a few more options such as Run addon, CD Directory path and User directory path but as yet have not needed to use them.

At this point in time you can either just go and hit the start game button or save settings button, but chances are you would be better off starting the game to make sure everything runs OK before you save your settings!

When the game itself loads you are treated to a nice intro section before the main menu screen appears, at this point you can set up several options for the game itself, one of the more important being the video settings option where you can select either Software rendering (slow CPU intensive) or MiniGL/Warp3D rendering (3D graphics card required) which is the obvious choice for those with the hardware. Another settings option is for Sound, where you can choose between, Default (normal Amiga audio), AHI (for those with sound cards) and Auto which I presume auto detects which configuration best suits your machine? There are many other options available to you to tailor the game controls to your liking, but I won't go through them all because it would take me forever!

The Right Moves

At this point, it may be a good idea to choose the Tutorial level which gives you all the clues on how to control Corvus with all his different abilities, you can practice everything to your hearts content without fear of being attacked as there are no enemies, just obstacles and at the end of the bit I went through you find a chicken



Cut scenes like this one add to the atmosphere of the game, it's a pity you can't skip them.

Product Information

Developer: Hyperion Software
Distributor: Forematt Home Comp. & most games dealers.
<http://www.hyperion-software.com/>
Price: £40

tied to a rope hanging from the ceiling (yes I did say a chicken) for you to try all your attack techniques on (bet he wished he was a battery hen after all the grief I gave him!) which is very funny indeed.

Let's Play

So on with the game then, after choosing Game and selecting one of the hardness levels from Adventure (Easy), Action (Med) and Armageddon (Hard) the game loads up and you find yourself immersed in a true 3D world which has danger around every corner. The graphics are absolutely brilliant and on my machine runs fairly smooth with some slowdown when there are lots of characters on screen at the same time with weapons firing all kinds of magical powers or flames or something at you all at once. The enemies that I have encountered so far have been quite varied all with different weapons ranging from sticks to high powered beams of light that kill you the instant they touch you (some kinda laser beam I guess), and as with most games of this ilk there are of course end of level bosses which are a real bastard to dispose of.

As I mentioned earlier, there are many things beside walking and running that Corvus has to perform to get through the various levels and some of them such as swimming are just jaw dropping to see as it looks just so good and the movement looks so natural, for instance on the surface of the water the ripples surrounding Corvus move away from him so realistically, he can just paddle (like when women swim... whoops gonna get in trouble for that one!) or if you hold down the shift key (run mode) where he charges off in to the distance like a champion swimmer... cool! Then of course he can swim underwater which again looks very natural and fluid (geddit!) but don't forget to come up for air every now and then, otherwise, well you drown naturally!

So on to terra-firma (the dry hard stuff) then. When confronted with obstacles too large to step onto then it's time to try out the climbing techniques and if the obstacle is very large such as a building then Corvus can leap up and grab the ledge before pulling himself up onto it, for instance walking across a roof. Another manoeuvre that requires practice (cos a lot of it is required) is leaping from one point to another (from one ledge to another for example) and for the wide gaps that need

crossing you can use the staff (the weapon you start with) as a pole to pole vault yourself across gaps that you thought not possible to cross! I won't mention all of the manoeuvres in detail, but I can tell you there are many, and so far I have used them all to get as far as I have got in the game, which probably isn't very far as I am not as good at these games as I would like to be, and also I don't get as much practice time in as I would like (wife and kids far too demanding) which is a pity cos once you start playing this game you don't want to stop, such is the addictive nature of the game I have found myself playing it at three in the morning to get the time to myself after everyone else is in bed.

The scenery I have encountered within the game (and demo) seems to be more varied than say Quake which tends to be dark and grey in many areas in comparison. This game is more comparable to Tomb Raider, with giant palaces, caves, outdoor areas and even has cut scenes between level to explain the evolving story. Unfortunately once the cut scene starts there is no way to skip it. In the many outside scenes giant dinosaur looking birds swoop down to attack you (and frighten the crap out of you the first time you encounter them), so you see it is a far more 3D environment with things coming out of the sky (and watch that lens flare baby) and don't forget the water holds enemies too!

Luckily for Corvus he has plenty of weapons at his disposal to cope with these darn creatures of evil, from his trusty staff (oh er!) which is very effective for close range combat to such other weapons as Hellstaff (rapid fire mini fireballs), Storm bow (fires arrows that explode above target with some kind of acid rain pouring down on them), Phoenix bow which fires arrows that ignite when fired and explode on impact emitting flames and shrapnel, Sphere of annihilation and Iron doom, well that's enough to be getting on with, but that is not all of them.

Then of course Corvus has spells at his disposal (once he has found them of course) and they are very powerful and varied indeed so lets describe some.

Tome of power increases the power of all weapons and spells Corvus has once it is used but is only temporary (shame), Ring of repulsion sends out a shock wave to repel enemies (useful when being overwhelmed), Teleport (for when the shit hits the fan), Meteor storm puts meteors in an orbit around Corvus and then attack the enemy with high accuracy (very effective), Morph ovum without doubt the funniest thing I have ever used as a weapon in any game I have ever played, turns your enemy into a chicken! I kid you not, this is



The graphics are simply stunning!

a site to see believe me, and last of all (I think) is the Lightning shield that activates small spheres of energy that shock enemies when they get near.

This game is gonna take ages to get bored with I can tell you, but just in case you do find it tedious casting spells and chopping the headsoff computer controlled opponents then why not try the multi-player mode and do it all to your mates (or not), as this game has an excellent multi-player mode which I must say seems to have very little impact on the speed of the game (brilliant eh), the multi-player mode connects two or more computers via a TCP/IP so you can play over a null modem cable, ethernet or across the internet.

Fun? YOU BETCHA!

I must admit I didn't think we would see anything that could top the offerings of Quake, but I was wrong, this game is just so good. Heretic has pretty much everything, superb 3D graphics, very realistic sound effects from footsteps that sound different when walking on different surfaces, to the sound of flaming arrows flying through the air and enemies telling you they are gonna kill you in a rather creepy voice. The game has immense gameplay, so much in fact that once you start playing you don't want to stop (well for cups of tea and food occasionally), and the challenges you face to complete the levels are just about the right balance of difficulty, in other words they are not so hard that you feel the need to give up, but at the same time they do require you to engage your brain every now and then.

All in all then. I would say this is one of the best games ever released to run on an Amiga, albeit a very powerful one! If you have ever considered that you may one day upgrade to PPC/3D Graphics card territory and you like playing games, then this is the time to do it.

Results



PD Paradise

Robert Williams takes a look at two classic Amiga utilities which are useful in totally different ways.

ProNET 3.4

By Michael Krause

Aminet: comm/net/ProNET34.lha
Licence: GNU Public Licence

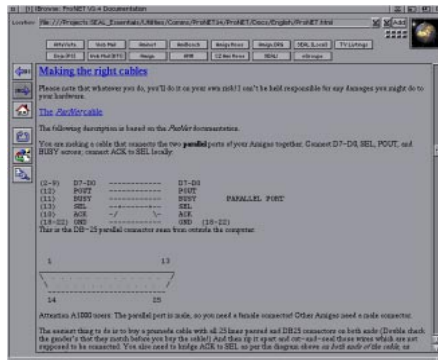
If you have more than one Amiga, have friends with Amigas or belong to an Amiga user group it is often handy to be able to transfer files without resorting to floppy disks. ProNET provides a simple, low cost solution to this problem by connecting Amiga via their parallel or serial ports. In many ways it is similar to the well known ParNet and SerNet from the Software Distillery which have been about since the 1.x days. However ProNet has several advantages over these old stalwarts including support for AmigaOS 2.x+ file system features.

For serial connections ProNet uses a standard null modem cable which can be bought at most computer shops, instructions to build your own are also included in the documentation. Parallel connections use a ParNet cable which are Amiga specific and thus somewhat more difficult to find. Most Amiga dealers should be able to sell you one and again instructions on building your own are supplied. For both serial and parallel connections the documentation recommends no more than 5 meters of cable otherwise reliability could suffer and, in the case of the parallel cable, damage could be caused to the connected Amiga's CIA chips.

ProNet isn't the easiest program in the world to install, you must manually copy the pronet.device and a ProNet directory containing the transfer modules into the Devs: directory and the commands which control the network into the C: directory of each Amiga on the network. Then a text file called .config has to be created in the Devs:ProNet/ directory, this can contain one or more lines each specifying a transfer module and any other information required to make a

connection. For example for the serial module you can specify a serial device, unit and baud rate allowing the use of add-on serial port cards. As you can mix and match you could connect several Amigas to one central machine that had a multi-port expansion card. Although it is more complex than using the Installer, each step of the installation is clearly described in the thorough AmigaGuide documentation.

In the network one machine is the client and the other the server. The server is the Amiga that has the drives you want to access from the client. On the server you run the pronet-server command, and on the client you run the pronet-start command for each drive on the server you want to be able to access. You give the device name on the server of the drive you want and the device name, the networked drive should have on the client as arguments to the pronet-start command. There is also a UNIQUE switch that will add the ProNet unit number to the volume name of the networked drive preventing duplicated volume names which can be confusing. If you want to be able to access networked devices on either of the machines in the network you need to run a "crossed" network with pronet-server on both machines. If a server machine crashes both machines in the network have to be restarted, however client



ProNET has extensive documentation in several formats, including HTML.

machines can be rebooted and reconnect to the server once they are up again.

Unlike ParNet which shows each remote device as a drawer inside the NET: device each device connected via ProNet is a separate device on the client machine. This means, for example, that if you connect to the CD-ROM on the remote machine an inserted CD's icon will appear on the Workbench of the client machine. It will have its correct volume name and acts just like it is connected locally (apart from the network speed) including support for automatic disk change detection. This transparency means you can, for example, run installations from the remote CD without having to make Assigns. A pronet-stop command is supplied to disconnect a remote device connected with pronet-start, if all the connected devices are stopped then the server can be restarted with on ill effects on the client.

Several additional utilities are included in the ProNet archive to help you get more from your ProNet network. Pronet-page can be used to flash a message on the screen of the other Amiga and pronet-talk allows you to chat to the user on the other machine. Pronet-run allows you to run a program on the other Amiga which could be useful if you are using it purely as a slave with no keyboard and mouse. There is also a third party utility, NetKeys, available on Aminet (comm/net directory) so you can control the remote Amiga with your keyboard and mouse!

ProNet used to be shareware, however since version 3.2 the author has released the source code under the GNU Public License and removed the need for a key file.

ProNet is a very useful and reliable utility, its only down side is a slightly complex setup, but you only need to do

Magic Menu 2.30

By Martin Korndorfer & Olaf Barthel
with artwork by Mario Cattaneo.

WWW: <http://www.magicmenu.de/>
Licence: Giftware

Magic Menu is a very well known utility that gives the pull down menus used by almost all Amiga programs a make over and work out! Although most Amiga users have probably come across Magic Menu at one time or another, I thought it would be worth taking a look at it as a new version, 2.30, has just been released.

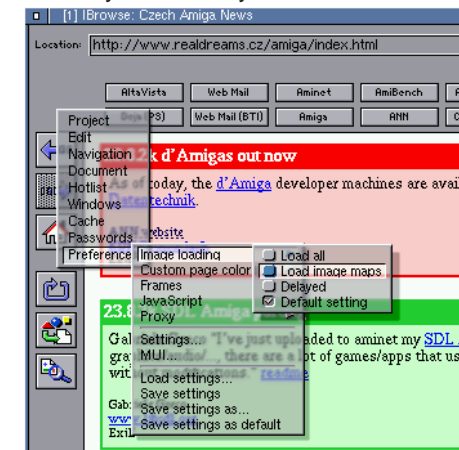
The main feature of Magic Menu is pop-up menus that appear under your mouse pointer rather than at the top of the screen when you press the right mouse button. These are particularly useful if you have a high resolution graphics card or autoscrollback screen as you don't have to move the pointer all the way to the top to find the menus. I also find pop-up menus useful when editing a document or image as I can keep the mouse pointer in the area I am working on. Pop-up menus do take a little getting used to because, like standard Amiga menus, the menus that appear are those for the current window not for the window the pointer happens to be over at the time. One neat feature of the pop-up menu implementation is that it remembers the last menu you accessed, and places the pointer over that menu the next time you open the menus, this saves time if you are choosing several options from the same menu, for example when formatting a document.

In addition the standard Amiga system of holding down the right mouse button, then releasing it with the pointer over a menu item to select method Magic Menu offers three other usage modes for menus. Sticky mouse button makes the menus appear when you click the right mouse button, you can then release it and the menus stay open. You can then move the pointer over a menu item and click the right button again to select it. The Smart Select mode tries to offer both options, if you keep the right button held down the menus work like standard Amiga menus, if you press and release the right button the menus stay up but you must use the left button to select menu items, and you have to click on a submenu title to open the submenu

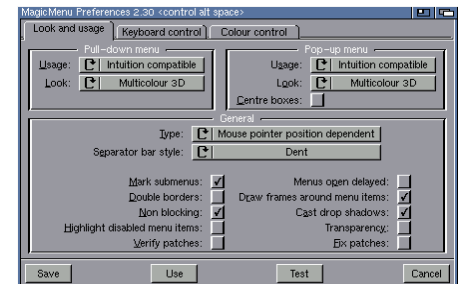
rather than just running the mouse pointer over it. I have to confess to being a fan of the standard Amiga menu behaviour, however several SEAL members prefer the menus to stay open and it is also easier for beginners not used to handling a mouse.

A choice of three different looks is available for menus. You can choose to leave them in the standard two colour, usually black and white, style of OS 3.x menus. The Old 3D look has a simple bevelled 3D style similar to standard Workbench windows and takes its colours from your Workbench palette prefs. The various symbols in the menus, for example the Amiga key symbol for keyboard shortcuts and the check mark, are replaced by small MagicWb style graphics which look very attractive. The third choice is Multicolour 3D which gives the menus a soft bevelled border and separator bars. The colours of Multicolour 3D menus can be set independently of the Workbench palette.

You can set Magic Menu to use exclusively pop-up or pull-down menus or there is an option to use pull-downs when the mouse pointer is in the title bar and pop-ups at other times. A different usage method and look can be specified for pop-up and pull-down menus. There are various options available to fine tune the look and usage of the menus. Multicolour 3D menus can have a drop shadow which is displayed using real transparency on a 24bit or 16bit graphics card screen. Another really jazzy feature is menu transparency which makes pop-up menus translucent, so you can see the screen behind them, tinted by the colour you select for the



Translucent menus may be gimmicky but look cool!



Magic Menu's attractive preferences program gives you plenty of control over how menus look and act.

menu. In some cases this can make the menu items hard to read but is good for showing off on a graphics card equipped Amiga!

Keyboard control is another useful feature, pressing the right Amiga key and the space bar (by default) opens the menus for the current window at the top of the screen. You can then use the cursor keys to choose a menu and menu item, Return activates the item and Esc cancels the menu. This is much easier than using menus with the Amiga's built-in keyboard mouse emulation.

I've been using MagicMenu for several years with no real problems, the only program which caused hassle with it was Final Writer, but even that problem has been cured in this new release. If you do have any problems caused by clashes with other utilities a couple of options have been added which should help solve them by regularly checking Magic Menu's patches.

Magic Menu's options are controlled by an attractive gtlayout based preferences program and comprehensive AmigaGuide documentation is supplied. If you like the program you are requested to send a donation of your choice to the authors. This is purely based on your conscience as there are no nag requesters or registered version with more features.

Magic Menu is a very professionally produced and useful utility, the additional features in this latest version add to its already excellent stability and compatibility and give you a few cool new options.

Top Tips

Robert Williams has some handy hints to make your Amiga life easier.

Wordworth on Graphics Cards

If you find text does not show up in Wordworth documents when the program is running on a graphics card screen, try adding the tool type "PICASSO=TRUE" to the Wordworth icon. This tooltype was designed with the original Picasso II graphics card software in mind, (hence the confusing name) but works equally well on graphics cards using either Picasso 96 or CyberGraphX.

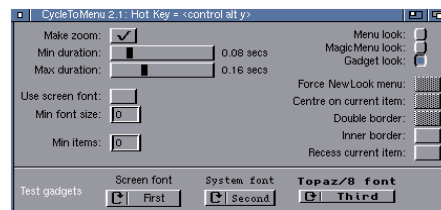
SYS: Keyboard Mouse

Most Amiga users probably know that you can move the mouse pointer using the keyboard by holding an Amiga key and pressing the appropriate directional arrow, holding down shift as well speeds up the movement. Left Amiga with Left Alt simulates a left mouse button press and right Amiga with Right Alt a right button press. While these short-cuts can be a life saver if your mouse stops working or is forgotten they can also be very useful in normal Amiga use as they allow pixel perfect placement of the pointer.

For example if you want to arrange some windows first move them roughly into place with the mouse. Then exactly align them by holding down the left Amiga and Alt keys while the pointer is in the title bar then move the window a pixel at a time with the cursor keys. A similar technique can be used to accurately define shapes in paint programs and image processors, I find it particularly useful for neatly cropping images.

Cycle Gadgets

Did you know that holding down Shift while clicking on a cycle gadget goes backwards through the selections, handy when you accidentally click past the choice you wanted. Even better is the incredibly handy CycleToMenu



CycleToMenu's window allows you to fine tune your improved cycle gadgets. (Aminet: util/cdity/CycleToMenu_21.lha) utility which turns each cycle gadget into a pop-up menu. Similar functionality is available in multi-commodities like MCP and MultiCX.

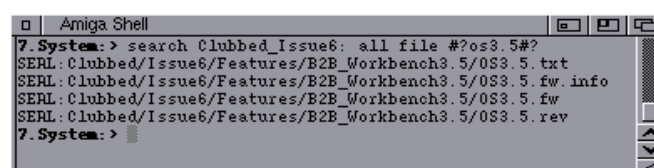
Search Command

Anyone who has been using their Amiga for a while will know what it's like to lose a file that you know is somewhere amongst the thousands on your hard disk. In these scenarios a file finding utility is pretty essential, there are several nice ones on Aminet but the AmigaOS also includes one... the search command. Search is command line only, you have to run it from a shell, but is quite powerful and easy to use. It can be used to search for both file of a particular name or files containing a particular string of characters.

To use the command to search for a particular file name enter the following:

```
search <path> all file <filename>
```

Where path is the name of the drive or directory you want to search and filename is the filename or pattern (using standard AmigaOS wild cards) you want to search for. The all switch tells the command to look through all the sub-directories of the path specified and the file switch tells it to look only at file names, not file contents. For example if I wanted to search for files with a name



Finding that elusive file is easy with search!

ending in .txt in the documents directory on my Work: partition I would enter:

```
search Work:documents/ all  
file #?.txt
```

To search for file containing a certain string:

```
search <path> all <text>
```

As before path specifies where to search and all causes the command to scan all the subdirectories. text is the string you want to search for in all the files, wild cards DO NOT work in this case and if the string has spaces it should be enclosed in quotes. For example if I wanted to search for the string "Amiga 1200" in all the files in my Projects: partition I would type:

```
search Projects: all "Amiga  
1200"
```

NOTE: The quotation marks (") must be used because the string contains a space.

Search is a very useful command, one caveat is that search's string searching is pretty slow so it's well worth looking out for a PD alternative like flashfind if you use this function a lot.

68060 Problems

If you have a 68060 based accelerator which crashes at start-up or is otherwise unreliable the key cause is incorrectly installed 680x0.library files.

The key to this problem is that the Amiga OS and many applications were not designed with 68040 and 060 in mind and while these processors are mostly backwards compatible with their predecessors some areas, in particular the FPU additional support.

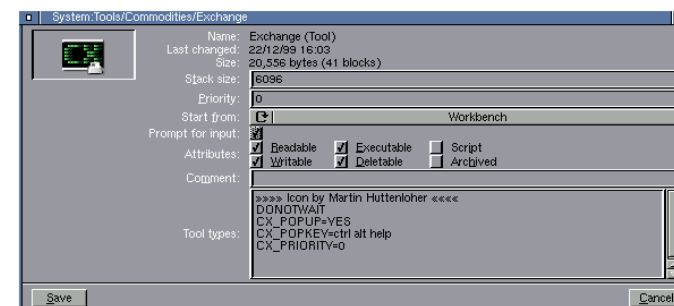
When Commodore introduced 68040 based accelerators they added a 68040.library to the OS. This library is loaded by SetPatch (at

Installing the Phase 5 060 libs

The latest Phase 5 libraries are available from the DCE website at <http://www.dcecom.de>. Once downloaded they need to be copied into your libs: directory. However as the 68040.library has to be replaced by the dummy library that then calls the appropriate library depending on the processor installed. This installation is outlined in the 68040dummy.library.notes file in the archive. As the description in that file is rather terse here is a table showing how the libraries should be installed. If you are upgrading to a newer version of the 680x0 libraries take care you maintain this setup (don't for example copy over the 68040.library from the archive without renaming it 68040new.library).

Original Name (at source)	Source	New Name (in Libs:)	Size*
68040.library	Wb Install disk	68040old.library	44 KB
68040.library	DCE	68040new.library	86 KB
68040dummy.library	DCE	68040.library	750 Bytes
68060.library	DCE	68060.library	104 KB

*Note that the library sizes are approximate and may well vary slightly depending on the exact version you are installing.



The Workbench Information window showing the tool types of a typical commodity.

the top of the startup-sequence) and supports '040 processors. '060 processors were introduced after Commodore closed so they could not implement the additions required to the OS. To get around this problem '060 accelerator vendors developed their own support libraries but needed a way to launch these at boot time. To do this they created a dummy 68040.library to replace the Commodore supplied one who's only task is to load the 68060.library to support the new CPU.

In later releases of Phase 5's '060 software the system became slightly more complex, the dummy 68040.library now contains code to detect the type of CPU and load the necessary library, if an '060 is detected the 68060.library is loaded and if an '040 is detected the 68040new.library is loaded. This allows one setup to be used on any processor.

If for any reason the correct libraries are not installed or, as happened when upgrading from OS 3.0 to 3.1, one of the libraries gets overwritten by an older version then an '060 based Amiga will become unstable.

As an aside old versions of the 680x0 libraries can cause problems with PowerPC software on the Phase 5 PowerUP boards, when you install new versions of the PPC libraries (or FlashROM in the case of the

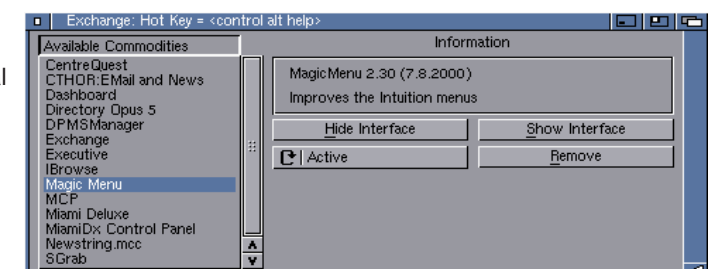
BlizzardPPC) it is wise to install the latest 680x0 libraries at the same time.

Commodities

Commodities are a special type of program added to the AmigaOS to allow programs which intercept user input (key presses and mouse movements) to act in a more system friendly way. These types of program tend to be small utilities, some simple ones like Blanker and ClickToFront are supplied with the OS in the Tools/Commodities drawer. Many other programmers have created new and more complex commodities, for example commonly used utilities like MagicMenu, Cycle2Menu and MCP are all commodities.

ToolTypes

All commodities have several special tooltypes that can be used to control their behaviour in addition to any program specific tooltypes.



Control your commodities with the Exchange.

DONOTWAIT

You should specify this tooltype if you want to place a commodity in the WBStartup drawer so it is started each time you boot your Amiga. If you do not the Amiga will wait for the program to finish and after a while issue a warning message.

CX_PRIORITY=n (where n is a number)

If several commodities are watching out for a particular key press the one with the highest CX_PRIORITY setting will intercept the key press. The default is 0.

CX_POPUP=YES or NO

If this tooltype is set to YES the program will open its window at startup, once you have a program setup and in your WBStartup you will probably want to set this to NO.

CX_POPKEY=

The key press that will open this commodities window and bring it to the front.

Commodities Exchange

Also in the Tools/Commodities drawer you will find the Exchange program, this is a utility for controlling the commodities running on your system, it is also a commodity itself. Exchange lists all the commodities running on your Amiga in the left hand side of the window and allows you to show or hide the interface of the selected one. You can also temporarily deactivate a particular commodity using the cycle gadget.

One common mistake made with commodities is to assume that when you close the window the program has quit like a standard Amiga program. With a commodity closing the window just hides the user interface, the program is still running. To quit a commodity call up its window (if it has one) then choose Quit from the Project menu or select it in the Exchange list then click the Remove button. Most commodities that do not have a window also quit if you try to run them again by double clicking their icon.

AmigaOS 3.5

Dave Kennedy discovers that there's more to the OS3.5 update than pretty icons...

I upgraded my operating system to the latest version of Workbench (Wb 3.5) quite a while ago now, and I haven't looked back since. There's something about what they've done to this OS that's quite subversive. In other computing realms, a new operating systems tends to mean a whole new learning curve, looks held above both style and content, and a bribe of bundled-in programs just to keep the users sweet (and the competition at bay). With OS 3.5 things are different. Refreshingly so.

After installing 3.5 and using my Amiga for a while, things started to become even more intuitive than usual. This is a feeling. It's impossible to tell you exactly which new features or enhancements make this so - its just that the whole thing is greater than its parts. Articles like this can't really do the new OS much justice. So try and help me out; picture each of the elements that I have drawn to your attention as part of a unique whole. A co-operative experience not unlike your current Amiga relationship, but a bit smoother, a bit more in tune, and even friendlier.

Now lets take a look inside. In a minute we will look at each drawer, one by one, but first well look at the new interface enhancements as well as the new menu system options.

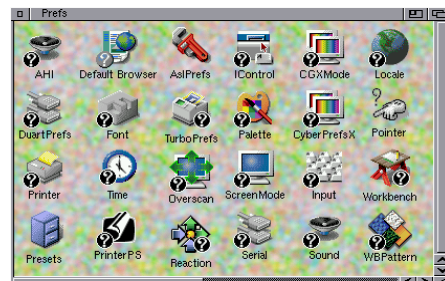
The first thing most people will notice about OS3.5 is the colourful icons that "glow" at the edges when they are selected. These new icons (not to be confused with the PD NewIcons system) are not just a pretty face, the Amiga icon format has been redesigned. The

trouble with the old icons was that they did not hold any palette information, they just picked up the colours you chose for Workbench. This was fine for simple four colour icons but now users have graphics card and more memory they want colourful icons. The new format holds the palette data in the icon and will render each one to look its best using the colours available. The new icon system still supports old style icons and also NewIcons (the PD ones this time) without running the patch.

Using the keyboard with the interface is a breeze. For instance, If you have a window selected, using the arrow keys will scroll the contents around. Hitting [Tab] will select one of the icons in that window - then you can select any icon by just moving around with the cursor keys again. To activate or open an icon (e.g. to run a program) just press [Right A]+[O]. If no windows are selected, this works the same for the workbench itself - so a broken mouse need never be a problem again.

Several seemingly small additions make the OS 3.5 Workbench much more pleasant than earlier versions. When you scroll the contents of a drawer they move with the scroll bar so you don't have to guess how much to drag. When copying and deleting large files Workbench now has a progress bar to keep you informed on how its going, although it's not multitreaded so you have to wait for the operation to complete before doing something else. Moving and copying several files via drag and drop has also been made easier as you don't have to keep Shift held down any more. There is a gauge at the left hand side of the top level window of each partition so you can tell at a glance how full it is. In addition to these gems there are the new Workbench menu options detailed below. Rather

Many programs now feature a new window border gadget for minimizing the application to an icon. Rather like the minimize of other systems, but better.



New Workbench Menu Options

You can sort the icons within a drawer in various ways by using the Window > Clean up by > menu options; Column, Name, Date and Size. And the make the window fit snugly to its contents with the Window > Resize to fit menu option. And you can still view the icons as a text list if desired (which can be sorted however you like). Along with the standard option to show only icons, or all files - most of these commands have a sensible keyboard equivalent via the numeric keyboard.

The information requester (Icons > Information... [Right A]+[I]) now has a text box for typing tooltypes in directly. And you can easily change an unattractive icon graphic by dragging you preferred choice onto the information requester.

Drawer by Drawer. System

The format command (also a menu option; Icons>Format Disk...) has been given a smart new Reaction interface. Beneath the skin it has been updated to support disks larger than 4GB.

Utilities

The installer has been improved, it can now open on its own screen with a gradient backdrop and display documents, graphics and sounds using datatypes.

Multiview shows off the new system file requester provided by the ASL.library. On the surface it looks the same as the old file requester, but when you look at the menus - there's a whole host of new

file manipulation options. In the Control menu you can now delete and rename files and there's also the option to create a new directory, very handy. The File List menu lets you specifying how you want the list of files to be displayed, you can sort by name, size or date and change the sort order. Finally you can also choose whether drawers should be shown first, last or mixed in with files.

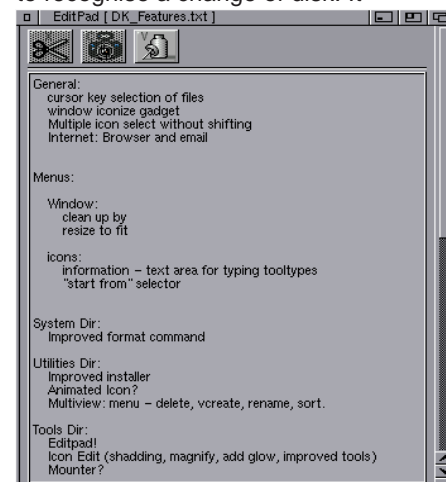
A freeware utility, ASLPrefs by Stephan Rupprecht, is available on Aminet (in the util/wb drawer) which lets you set the default options (sort by, sort order, drawers option and opening position) for system file, font and screenmode requesters.

Tools

Editpad is a revelation. Its a text editor, pure and simple. And it's just how a text editor should be; pure and simple. It has a toolbar with only three icons - cut, copy and paste. You can drag-and-drop files onto the interface to open them, where the appear auto-wordwrapped and ready to scroll. It can handle very large files too (I tried loading the main HTML page from the original documentation, it did take about six seconds to load, but then this was a very, very, large file). Editpad has extra functionality in its menus - where you can Insert another text file and Print, Find and Replace, and jump to a given line number - amongst other things.

The icon editor has advanced to deal with the new icons. Some of the new features include dithered palette colours for subtle shading, increase magnification gadgets for intricate pixel Tweaking, and add glow for that instant new look icon.

Mounter is a useful little utility for those with stubborn removable disk drives (such as ZIPs etc.) which sometimes fail to recognise a change of disk. It



presents a list of all the devices connected to the controller of your choice (you can set this using the DEVICE= tooltype), when you click on a device it then lists all the partitions on that device and allows you to individually mount each one.

HD Toolbox been completely reworked with a new Reaction interface. Menu options allow you to save the Rigid Disk Block of a drive to another disk for security and load it back if disaster strikes. The new version supports disks greater than 4 Gigabytes in size too.

PlayCD; for playing all your music CDs, and with all the features of a quality CD player. random play, shuffle, repeat, single button track selection.

Devs

The most noticeable additions here are the GIF and JPEG datatypes - so now - all- your favourite graphics programs that work with datatypes will be able to access these World Wide graphic formats. Including Multiview :-).

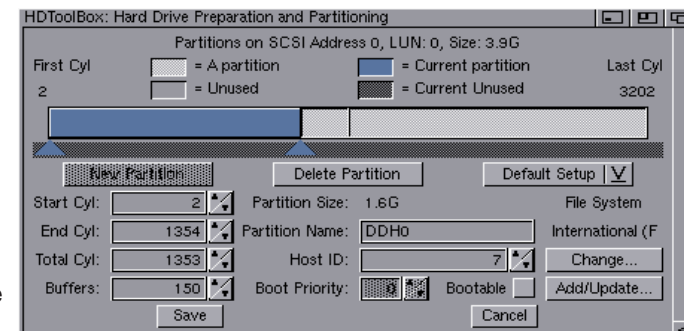
Prefs

Fonts prefs; gives much more choice on which fonts you can use on Workbench - includes a natty little preview display.

The Reaction preferences editor lets you set the look of programs which use the new Reaction GUI system that comes with OS3.5. All programs that use Reaction are font sensitive (they use your choice of display font) and their windows can be re-sized. In addition to letting you change the font Reaction prefs also gives you a choice of button look and spacing.

Workbench prefs; allows you to hide any of your partitions from display and also contains the settings for the icon system.

Although the WbPattern preferences editor hasn't changed much in itself (datatype quality settings and some new drawing tools have been added) OS3.5 is supplied with a very fine selection of backdrops and tiled backgrounds to compliment the new look icons. All of the backdrops are very professional looking and some have a sense of humour too.



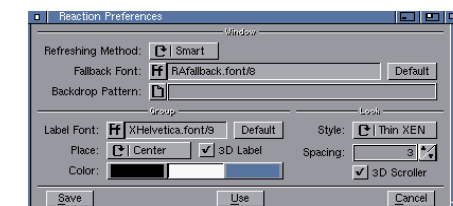
Even HDToolBox gets a make over.

CacheCDFS prefs; allows FULL control of how your CDs are presented to your system. There are lots of features that enable you to read CDs that were originally prepared for use only on another operating system.

All the other preferences editors have been given the Reaction treatment which makes them look much better than 3.1 versions which were stuck with the dreaded Topaz.

Docs

Full OS 3.5 documentation in HTML format. The first update for OS 3.5, BoingBag number 1 (available from <http://www.amiga.com/3.5/support.shtml> and cover CDs) include a useful utility called Nicer which converts the original 3.5 documentation into smaller pages for much easier viewing! The documentation consists of manuals for Installation, Hard Disk, Workbench, AmigaDOS and AREXX. Only the Workbench manual was supplied as standard with the A1200 so the other

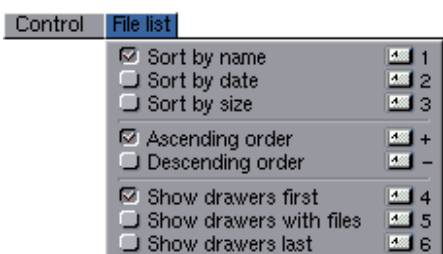


information will be very handy for many people.

S (Scripts) Drawer

This drawer includes an ARExx example that assesses the new Workbench ARExx port; CloseAllDrawers.rexx, which unsurprisingly closes all the drawer windows open on the Workbench. With the new ARExx port, and ARExx manual - the more adventurous users will be able to automate almost every aspect of Workbench something that is not possible without extremely dirty hacking in previous Workbench versions.

Oh, and there's a browser and email

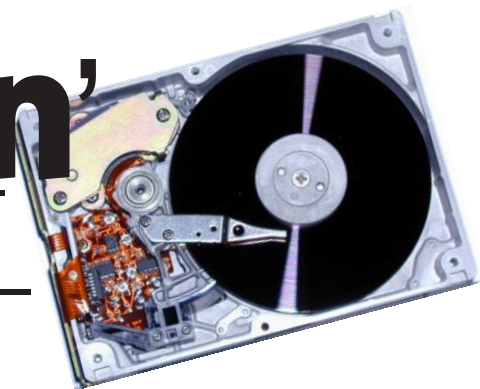


The useful new file requester menus.

Hard Drivin'

Getting the best from your hard drive.

By Robert Williams



WARNING!

Fiddling with your hard drive settings can seriously damage your data. Make a backup of all your data before you change any settings or options, as it is possible to delete or make inaccessible data on your hard drive.

Breaking the 4Gb Barrier

As I mentioned in the last issue, the largest hard disk you can use with a stock OS 3.1 or previous Amiga is 4Gb. However, if you want to use a bigger drive there are a number of solutions including the new AmigaOS 3.5. There are two factors which limit the size of disk that can be used with your system, the controller's driver software (often known as the device driver) and the file system (which manages the data on the disk). If either of these do not support large drives any data saved to a partition partially or entirely above 4Gb could be lost and data on partitions below 4Gb (which will otherwise work normally) could be corrupted. If data below the 4Gb limit is corrupted in this way it is possible that the Rigid Disk Block (RDB) at the start of the drive could also be overwritten. The RDB contains the details of all the partitions on the drive and if it is wiped none of the partitions can be accessed. So as you can see it is important to ensure that your system is correctly configured before you start using a large disk in anger.

I Don't need more than 4Gb of space but I can't buy a drive that small!

This is a common problem, with most Amiga programs and data files being pretty compact many Amiga users do not need huge hard drives. 10Gb+ drives are common in the PC market so smaller drives are just not available any more. Fortunately this doesn't need to worry us because you can just partition a bigger drive up to the 4Gb limit and it will work fine with no additional software or upgrades.

OS 3.5

With AmigaOS 3.5 support for disks bigger than 4GB is built into the OS.

This is provided by a new versions of the scsi.device (43.x) and FastFileSystem (45.x) both supporting the NSD (New Style Device) standard. The SetPatch command, run at the beginning of the start-up-sequence, can now patch existing device drivers to comply with the NSD standard and thus support large disks. This patching is controlled by the NSDPatch.config file in Devs:. In the future new and updated device drivers should comply with the NSD standard without requiring the patch.

NOTE: For several years after the demise of Escom time limited beta versions of the updated scsi.device, FastFileSystem and NSDPatch were available from Amiga. You can patch these to get around the time limit and use them with OS3.1. However, I would recommend buying OS3.5 as the best way of getting these updates, versions of all the OS utilities that work on large disks and supporting the people who developed them.

EIDE '99

Elbox's EIDE '99 software, supplied with their FastATA (Power Flyer) and 4 way buffered IDE interfaces, splits hard disks greater than 4GB into several logical drives of 4GB in size plus one logical drive for the remainder. This means that standard file systems and disk utilities can be used over the whole drive, the only real limitation is that you couldn't make a partition greater than 4GB. The split mode can be disabled incase you would rather use a different method of accessing the large disk.

Direct SCSI

Some third party file systems, including PFS and SFS, include a direct SCSI version, these file systems send commands to the hard disk (which can be either SCSI or IDE despite the name) directly and therefore do not rely on large disk support in the device driver. This is by far the easiest way of using large disks on the Amiga, however beware that the OS3.1 and earlier scsi.device is limited to a maximum of 8Gb even with a direct SCSI file system.

A Word of Warning

If you use a hard disk greater than 4GB with either a direct SCSI file system or via an NSD device with OS3.5 then you need to be careful when setting up and working with your hard disk:

The boot partition must be located within the first 4GB of the hard disk as it must be accessed before any software patches are loaded.

Disk utilities such as data recovery programs, disk optimisers and formatters must specifically support the large disk standard you are using. Currently that rules out using older utilities such as DiskSalv, QuarterBack and ReOrg on partitions above 4GB.

Unless you have OS3.5 you must format partitions above 4GB using the QUICK option.

Third Party File Systems

The Amiga's Fast File System has some good points but despite its name speed is not one of them. A couple of third party file systems are available which address this problem and offer additional features. Note that installing either PFS and SFS on a partition will destroy all the data so you will need to make a backup and copy all your data back after installation. Thanks to the Amiga's RDB system which stores the filesystem(s) used on a disk all partitions including the initial boot partition can be formatted with a third party file system.

PFS 3

The Professional File System first appeared as a PD file system for floppy disks quite a few years ago. It was developed into AmiFileSafe (AFS) and sold commercially by Forth Level Developments. Although AFS was a good product (there were a few bugs at first) that was not matched by FLD's service giving AFS a bit of a mixed reputation. FLD eventually went out of business and the developer of AFS, Michael Pelt got the distribution rights back.

Reverting to the old PFS name he produced a new version, PFS 2 which was followed up by the recently released PFS 3.

PFS has a number of advantages over FFS, the most noticeable is that it is considerably faster at almost all file operations, reading, writing and creating files show some improvement but the main gains are in deleting files (which is practically instant whatever the file size) and directory listings. Several versions of PFS are supplied; a standard replacement for FFS, a direct SCSI version for disks greater than 4.3GB on all controllers, a version for use on floppy disks and muPFS which has multi-user capabilities like permission flags. PFS is designed to be more secure than FFS, with FFS if your Amiga crashes or is switched off while writing a file to the hard disk that partition becomes invalidated and the file being written is often corrupted. With PFS the worst that could happen is that the file being saved when the crash happened will not be there once the Amiga has rebooted. If the file was overwriting another the old one will still exist.

In addition to speed and security PFS also offers some useful additional features. Each partition has a hidden drawer called .deldir, in this drawer the last 100 (by default) delete files are available can be brought back from the dead simply by copying them to another drawer. PFS lets you define roll over files, these are limited to a certain size, when that is reached the start of the file will be trimmed. This is useful for log files which are constantly added to.

The main criticism levelled against AFS and PFS 2 was that no file recovery programs were available for them should disaster strike. With PFS 3 a new utility, PFS Doctor has been introduced, this offers several options allowing you to scan partitions for errors and correct them. I have been using PFS and its predecessor AFS for several years, while I have had the odd problem (maybe three or four in that time) all that happened was that the volume became read only. So I copied my data off, reformatted and copied it back. Since I've had PFS 3 I haven't had any problems and thus no reason to try PFS Doctor, however I have read a couple of posts on Usenet and mailing lists from people who had success with it.

Overall I like PFS and have found it to cause less problems than FFS.

SFS

The Smart File System is developed by John Hendrikx, currently freely available for public beta testing. Although developed independently SFS is very similar to PFS in many ways, it offers enhanced performance over FFS, partitions cannot be invalidated and it even offers a deleted files directory. On the negative side it also shares PFS's lack of data recovery utilities (a simple one is supplied). Using a beta file system may worry some people slightly although in general SFS has a fine reputation with many users very happy with its performance. Some tests indicate that SFS is slightly slower than PFS in some operations. However in general there does not seem to be a significant difference in performance between them.

Optimising FFS

If you don't fancy installing a new file system or want to be able to use the wide range of recovery tools then you'll want to get the best possible performance out of the Amiga's existing Fast File System (FFS). Commodore's HDToolBox and many other partitioning utilities were designed when any hard drive was a luxury and anything over 100Mb was an unattainable dream, while they work perfectly well on larger disks some of the default settings hark back to those halcyon days. You can get better performance out of almost any drive by altering the following settings for your partitions in HDToolBox (or similar):

NOTE: These settings apply to Fast File System partitions only, if you use a custom file system like PFS or SFS check the documentation for the correct settings.

Buffers

For each partition the Amiga allocates some buffers in RAM, when data is requested from the hard drive the next few blocks of data are also read into these buffers in the hope that they will be the next thing requested, thus eliminating a relatively slow disk access. The number of buffers is the number of blocks buffered, with the default value of 30 and 512 byte blocks this is just 15KB of data. I would suggest increasing this to 100 or more. Remember that these buffers will be allocated at all times, so you will lose some RAM. You can change the number of buffers used by partition without effecting the data on it.

Block Size

One block of data is the minimum unit for information stored on your hard disk. Any file will take up a whole number of blocks, so a tiny file of a few bytes will still take up one block. The default block size used by HDToolBox is 512bytes, increasing the block size increases the performance of the drive but makes small files use more disk space. Increasing the block size to 1024 bytes will give a performance boost without giving up too much space. On partitions where you store mostly large files (images, CD image files etc.) you may want to push it up further.

IMPORTANT: Changing the block size of a partition will destroy all the data on that partition, ensure you have backed up your data!

File Corruption

If you find files are becoming corrupted when you move or copy them (for example a program won't run when moved to another partition or a previously fine image suddenly contains errors) there may be a problem in your hard drive configuration. Two settings commonly cause file corruption problems.

Max Transfer

The Max Transfer value sets the largest chunk of data that will be fetched from or sent to the hard drive in one go. The default setting in HDToolBox of 0xFFFFFFFF allows up to 4Gb to be transferred, effectively no limit. With almost all SCSI hard drives and some ATA drives this is no problem, in fact it allows the drive to make best use of its built-in cache. However some drives, and this includes many ATA models corrupt data if more than 128KB transferred in one go. If MaxTransfer is left at the default this leads to files becoming corrupted when they are copied to and from the drive. The cure for this problem is to set the MaxTransfer to slightly less than 128KB, a hex value of 0x1FE00. It is important to realise that the MaxTransfer is a SIZE not a RATE, it has very little effect on the performance of the drive so all in all it's good practice to set it to 0x1FE00 for all partitions on ATA drives.

Mask

The mask setting allows you to limit the memory a DMA controller uses. This can be used to solve problems of clashes between a controller board and other add-ons, in particular accelerators.

Hard Drivin' on the Internet

File Systems

SFS - <http://www.xs4all.nl/~hjohn/SFS/>

PFS - <http://www.greed.nl/>

Amiga Specific

Amiga Hard Drive User's Guide - Available on the OS3.5 CD in HTML format, covers prepping and formatting hard drives in detail also covers the new version of HDToolBox. I believe the paper version of this manual was only shipped with A4000 systems, I have a copy which SEAL members can borrow.

AmigaOS 3.5 FAQ - Answers several common questions regarding big disk support in OS 3.5:

<http://www.amiga.com/3.5/support-faq2.shtml>

Non-Amiga Specific

<http://www.scsifaq.org/> - loads of information on SCSI, includes setting up and trouble shooting SCSI buses.

<http://www.ata-atapi.com> - Similar to the above but for ATA devices (IDE). Maintained by a member of the ATA standards committee.

<http://www.storagereview.com/> - New SCSI and ATA drives reviewed and rated, also has an extensive reference section.

Discussion Groups

comp.sys.amiga.hardware - Usenet newsgroup dedicated to Amiga hardware including drives and controllers.

comp.periph.scsi - Usenet newsgroup for discussion of SCSI devices and controllers used on any platform.

You can view these groups using a web browser using a service like <http://www.deja.com/usenet> or with a dedicated news reader like NewsRog, Thor or Microdot II.

Hard Drive Manufacturers

All hard drive manufacturers have a website where you can get specification details and set-up instructions for any of their drives. For all the manufacturers I can think of the web address is just their name topped and tailed with <http://www> and .com/, for example <http://www.quantum.com/>.



I found full installation information for an 11 year old ProDrive on quantum.com



Issue 1*
CyberStorm PPC review.

Issue 2*
Graphics Cards Explained.
Workbench Cookbook.

Issue 3
Get Netted: Get your Amiga on the 'net.
Internet software review.

Issue 4*
Photogenics 4 & ImageFX 4 reviews and layers tutorial.

Issue 5*
CD-R Explained and CD mastering software round-up.

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Please list the back issues you require and send a cheque or postal order for £2.50 per issue to: Clubbed, 26 Wincoat Drive, Benfleet, Essex, SS7 5AH.

* We only have limited stock of this issue please telephone (01268 569937) to confirm availability.

Keep Up-to-Date with the clubbed-announce Mailing List

Clubbed now has its own Internet mailing list to keep connected readers better informed about the magazine. The mailing list called clubbed-announce is hosted by the OneList service.

We will post a minimum of one update on the list per month but your mail box will not be flooded because this list can only be posted to by the editor.

How To Join

Subscribing to the list is free, just send a blank EMail to:

clubbed-announce-subscribe@egroups.com

Or go to the list page on the OneList website, if you subscribe on the website you will need to register (if you haven't already for another list):

www.egroups.com/group/clubbed-announce (all one line)

We hope the list will keep you better informed about Clubbed and encourage you to join.

Next Issue

What's coming your way in issue 7?

Features

We look at the **scanners** available for the Amiga and review the available software.

Reviews

We hope to be reviewing ArtEffect 4, Amiga Writer 2 and the latest versions of Vaporware's Internet programs.

Support

Startup Problems - we help you get out of those sticky situations when your Amiga just won't boot.

Plus all the latest news and more...

Clubbed Issue 7

is planned for

December 2000

NOTE: This is a provisional contents list and is subject to change without notice.



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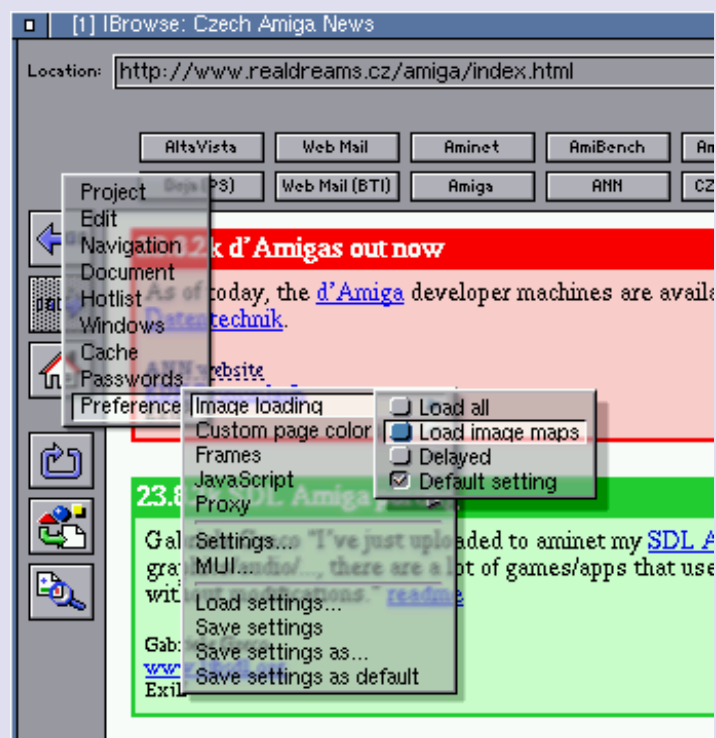
Heretic 2



*Heretic 2 has some fabulous and varied locations.
Read Mick Sutton's full review on page 36.*

In the Mag

Magic Menu (page 39)



Version 2.30 of Magic Menu sports these cool translucent opo-up menus on hi and true-colour graphics card screens! The effect is of course optional!

Photogenics 5



Paul Nolan has recently added some more of his brilliant tutorials to the Photogenics website. This image is the result of the tutorial on the ContourMap effect.

Anyway take a look for yourself at:

www.paulnolan.com

Wanted

**Your work for the Gallery of
Clubbed issue 7.**

If you have something, created with your Amiga that you are proud of and would like to show to other Clubbed readers please send it in to the normal address.

We are interested in any visual work, for example it could be a website, poster or an image, so go on send something in!



<http://www.seal-amiga.co.uk/>